

Dr. MUHAMMAD QASIM

Tenured Associate Professor,

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PERSONAL STATEMENT

Dedicated to advancing academia through teaching, innovative research, collaborative endeavors, and student mentorship.

EDUCATION

- **Ph.D.**, Mathematics, Quaid-i-Azam University, Islamabad-Pakistan, **April 2011**.
- **M.Sc.**, Applied Mathematics, International Islamic University, Islamabad-Pakistan, **Dec 2006**.
- **B.Sc.**, Major Mathematics, University of Punjab, Pakistan, **2004**.

RESEARCH INTERESTS

- Modelling of non-Newtonian fluid Flow Problems.
- Biofluid Mechanics (Peristaltic flows; Flows in stenosis arteries).
- Flows in cavities and ducts.
- Heat and Mass Transfer Analysis of Boundary Layer Flows.
- Micro and Nano Fluidics.
- Entropy Generation Minimization.
- Asymptotic and Perturbation Methods.
- Analytical and Numerical Solutions of Differential Equations.

TEACHING AND RESEARCH EXPERIENCE

- **Tenured Associate Professor**, Department of Mathematics, COMSATS University, Islamabad, Pakistan, **14 February 2018-Present**.
- **Assistant Professor**, Department of Mathematics, COMSATS University, Islamabad, Pakistan, **25 August 2011 to 14 February 2018**
- **Postdoctoral Fellowship**, Department of Mathematics, Faculty of Science, Jiangsu University, Zhenjiang 212013, China, **2019-2021**.

- **Senior Research Assistant**, Quaid-i-Azam University, **September 2008 – March 2011**.
- **Visiting lecturer**, COMWAVE Institute of Science and Information Technology Islamabad, **July 2007-May 2010**.

AWARDS, HONOURS and ACCOMPLISHMENTS

- Listed among the World's Top 2% Scientists for the years 2021, 2022, and 2023, based on the Elsevier Data Repository. It is prepared by Prof. John P.A. Loannidis and his colleagues at Stanford University.
- Research Productivity Award (RPA) by Pakistan Council for Science and Technology (PCST) in 2012, 2013, 2014, 2015 and 2016.
- Ranked 19th in the overall list of Productive scientists for Mathematical sciences and 10th among the young scientists (under 40 years of age) in mathematics by Pakistan Council for Science and Technology (PCST) in 2017 (<https://www.pcst.org.pk/docs/PSP/listspsp2018/under40/math.pdf>)
- Research Productivity Award (RPA), by COMSATS University Islamabad, Islamabad-Pakistan, 2012-2017.
- Received honorarium on remarkable performance during year 2014 & 2015.

RESEARCH STUDENT SUPERVISION

PhD Students (05)

1. **Mrs. Saima Kanwal** (In Progress) “Modelling and Simulation of Non-Newtonian Blood Flow in Stenosis Arteries”
2. **Mr. Zafar Ali** (In Progress) “Entropy Production in Peristaltic flows with variable Transport Properties”
3. **Mr. Muhammad Usman (2023)** “Peristaltic flows in nanofluids and curved channel and tubes”
4. **Mrs. Nadia Riaz (2022)**: “Similar and Non-Similar solutions of boundary layer flows of Nanofluids”
5. **Mr. Idrees Afridi (2020)**: “Entropy Generation Analysis of Boundary Layer Flows”

MS Students (23)

1. **Muhammad Rashid (2023)** “Peristaltic Flow of Williamson fluid in an inclined channel in the presence of Joule and Porous dissipation”
2. **Mr. Muhammad Waleed Ijaz (2023)** “Carneau-Yasuda Fluid Model for Blood Flow in a Catheterized Artery with Stenosis and Aneurysm”

3. **Ms. Niba Kianat (2023)** “Flow Over a Radiative Needle Moving in a Stream having Temperature-Dependent Viscosity and Thermal Conductivity.”
4. **Muhammad Ejaz (2023)** “Radiative Flow of Nanofluid in a Converging/Diverging Channel”
5. **Ms. Yusra Saleem (2023)** “Peristaltic Transport of Bingham-Papanastasiou Fluid with Temperature Dependent Electric Conductivity”
6. **Mr. Muhammad Waqar Manzoor (2023)** “Heat Transfer in a Longitudinal Non-linear Radiative Fin with Temperature Dependent Properties”
7. **Mr. Mohsin Jabbar (2022)** “Unsteady Flow of non-Newtonian Blood Based Nanofluid Through a Stenosed Artery with Aneurysm”
8. **Ms. Iqra Khalil (2022)** “Unsteady Magnetohydrodynamic Blood Flow Through a Tapered Overlapping Stenosed Artery”
9. **Mr. AttaUllah Khan (2021)** “Boundary Layer Flow of Williamson Fluid Over a Stretching Sheet of Variable Thickness”
10. **Mrs. Amna Khaliq (2021)** “Peristaltic Flow of Hybrid Nanofluid in a Circular Tube”
11. **Mrs. Arshma Khan (2021)** “Mixed Convective Peristaltic Flow of Micropolar Fluid Through a Vertical Asymmetric Channel”
12. **Mrs. Momna Abdul Rab (2021)** “Effect of Magnetic Field and Joule Dissipation on Peristaltic Flow of Carreau Fluid in a Tapered Channel”
13. **Mr. Muhammad Usman (2021)** “Peristaltic Flow of Non-Newtonian Fluid under the Influence of Temperature Dependent Magnetic field”
14. **Mr. Sikander Sultan (2021)** “Nonlinear Convection in Peristaltic Flow with Variable Thermal Conductivity”
15. **Mr. Aamir Sohail (2020)** “Peristaltic Transport of Blood Based Casson Nanofluid in a Microvessel”
16. **Mr. Asad Hassan (2020)** “Second law analysis of peristaltic flow with Variable Transport Properties”
17. **Ms. Warda Ijaz (2019)** “Entropy Generation Analysis of Peristaltic flow of Jeffrey Fluid with Variable Thermal Conductivity and Slip Effects”
18. **Ms. Maria Hamdani (2018)** “Blasius and Sakiadis Flows of Hybrid nanofluids”
19. **Ms. Farah Naz (2017)** “Jeffrey-Hamel flow of Nanofluids”
20. **Ms. Zoya Sultana (2016)** “Boundary layer flow of Micropolar fluid over stretching/shrinking sheet with heat transfer-Exact Solutions”
21. **Ms. Sana Irshad (2015)** “Peristaltic flow of nanofluid in an asymmetric channel”
22. **Ms. Sabahat Naseem (2013)** “Soret and Dufour effects on magnetohydrodynamics (MHD) stagnation point flow of a Micropolar fluid”
23. **Ms. Naila Nasreen (2013)** “Flow of a nano fluid past a stretching/shrinking Sheet with convective boundary conditions.”

COURSES TAUGHT

Graduate Level

1. Perturbation Methods-I (Spring 2014, Spring 2015, Fall 2017, Spring 2019, Fall 2023).
2. Viscous Fluids-I (Spring 2018, Fall 2022)
3. Viscous Fluids-II (Spring 2021)
4. Non-Newtonian Fluid Mechanics (Fall 2013, Spring 2023)
5. Topics in Applied Mathematics (Spring 2023)

Undergraduate Level

1. Fluid Mechanics (Spring 2012, Fall 2012, Spring 2017)
2. Tensor Analysis (Fall 2022)
3. Partial Differential Equations (Spring 2012, Spring 2022)
4. Ordinary Differential Equations (Spring 2012, Fall 2012, Spring 2013, Spring 2016, Fall 2016, Fall 2018, Spring 2018, Spring 2020, Fall 2021, Spring 2022, Spring 2023).
5. Differential Equations (Spring 2013, Fall 2013, Fall 2015, Spring 2015, Fall 2017, Spring 2017, Spring 2021)
6. Elasticity (Fall 2014)
7. Abstract Algebra (Fall 2014)
8. Calculus and Analytic Geometry (Fall 2011, Fall 2021, Fall 2023)
9. Calculus-I (Fall 2015)
10. Calculus-II (Spring 2014, Spring 2017, Fall 2018)
11. Calculus-III (Fall 2016, Fall 2020)
12. Numerical Optimization (Fall 2011)
13. Real Analysis-I (Spring 2016)
14. Linear Algebra (Fall 2016, Fall 2017)

INTERNATIONAL RESEARCH VISITS

- Department of Mathematics, Faculty of Science, Jiangsu University, Zhenjiang 212013, China, 2019-2020.
- Visiting Researcher, University of Technology Malaysia (UTM), August 2016.
- Visiting Researcher, University of Technology Malaysia (UTM), August 2013.

CONFERENCES/PRESENTATIONS/SEMINARS

- **Organizing Committee Member**, “Recent Development in Fluid Mechanics, Environmental Science and Renewable Energy” November 27-29, 2023, Islamabad-Pakistan.

- **Keynote Speaker** “International Conference Advanced in Applied Mathematics (ICAAM 2021)” Via Zoom Meeting, March 31, 2021, Jakarta-Indonesia.
- **Keynote Speaker**, “Third International Conference on Emerging Trends in Engineering”, Management and Sciences (ICETEMS-2018), Pakistan.
- **Reviewer** “International Conference on Applied and Engineering Mathematics, September 4-5, 2018” HITEC University Taxila, Pakistan.
- **Speaker**, “Fifth International Conference on Recent Developments in Fluid Mechanics”, June 24-26, 2013, Quaid-i-Azam University, Islamabad-Pakistan.
- **Speaker**, “Fluid Mechanics Workshop” Organized by Department of Mathematical Sciences, **University of Technology Malaysia (UTM)**, 24 Jan 2013.
- **Speaker**, “International workshop on Mathematical Sciences and its applications, at **COMSTECH Pakistan** 23-25, May 2011.
- **Organizing Committee Member**, “Fourth International Conference on Recent Developments in Fluid Mechanics”, August 03-5, 2010, Quaid-i-Azam University, Islamabad-Pakistan.
- **Organizing Committee Member**, “Third International Conference on Recent Developments in Fluid Mechanics”, July 30-August 01, 2009, Quaid-i-Azam University, Islamabad-Pakistan.
- **Organizing Committee Member**, “Second International Conference on Recent Developments in Fluid Mechanics”, August 11-13, 2008, Quaid-i-Azam University, Islamabad-Pakistan.
- **Participant**, “International Conference on Mathematics”, September 12-14, 2006, Quaid-i-Azam University, Islamabad-Pakistan.

RESEARCH GRANTS

- COMSATS Research Grant Program (CRGP), COMSATS University Islamabad.
Title: Modelling and analysis of entropy generation in peristaltic flows (Principal Investigator)
Duration: 01/01/2018-31/12/2018, Amount: RS 77,000 (Pakistani Rupees)
- National Research Grant Program (NRPU), HEC Pakistan
Title: Entropy generation minimization in peristaltic flows of nanofluids: mathematical modelling and analysis (Principal Investigator)
Amount, RS 1.4 million (Pakistani Rupees) (**Surrendered due to Postdoc leave as per HEC policy**).

Additional Academic Duties/Services

- In-Charge Graduate Program, Department of Mathematics, COMSATS University Islamabad 2000 to date

- Deputy Chief Proctor, COMSATS University Islamabad, Pakistan, 2022 to date
- In-charge of Pre-PhD Seminar series, Department of Mathematics, COMSATS University Islamabad 2018-2022
- Proctorial Board Member (Group Leader), Department of Mathematics, CIIT Islamabad.
- Member of Undergraduate Course Allocation committee.
- Reviews of MS/PhD synopsis.
- Class counselor for BS Mathematics, Department of Mathematics, CIIT, Islamabad.
- Member convocation food committee.
- Course Coordinator.
- Orientation day duties.

PAPERS IN REFEREED JOURNALS

1. M. I. Afridi, Zhi-Min Chen, N. Riaz, **M. Qasim**, Impact of porous and magnetic dissipation on dissipative fluid flow and heat transfer in the presence of Darcy-Brinkman porous medium, *Journal of Porous Media*, 27 (2024) 45-65, DOI: 10.1615/JPorMedia.2023045345.
2. M. I Afridi, **M. Qasim** and A. J. Chamkha, Computational analysis of entropy generation in three-dimensional mixed convection flow with thermal dissipation and variable thermal conductivity, *Numerical Heat Transfer, Part A: Applications*, <https://doi.org/10.1080/10407782.2023.2282150>.
3. M. I. Afridi, Zhi-Min Chen and **M. Qasim**, Entropy generation in local non-similar dissipative MHD flow of $\text{CH}_3\text{OH} + \text{Fe}_3\text{O}_4$ and $\text{C}_{12}\text{H}_{26}\text{-C}_{15}\text{H}_{32} + \text{Fe}_3\text{O}_4$ ferrofluids, *Journal of Magnetism and Magnetic Materials*, 586, 15 (2023) 171177.
4. M. U. Ashraf, **M. Qasim** and S. Shafie, Magnetohydrodynamic (MHD) peristaltic flow of blood containing cylindrical shaped gold nanoparticles in a non-uniform tube in the presence of Joule dissipation, *Journal of Magnetism and Magnetic Materials*, 578 (2023) 170708.
5. Z. H. Khan, W. A. Khan, Z. Yang, M. Hamid and **M. Qasim**, Mixed convection flow in a channel with a dimpled section and adiabatic cylindrical obstacle under the influence of magnetic and Joule effects, *Results in Physics*, 49 (2023) 106550.
6. F. Aslam, S. Noreen, M. I Afridi and **M. Qasim**, Analysis of Homogeneous/Heterogeneous Reactions in an Electrohydrodynamic Environment Utilizing the Second Law, *Micromachines*, 14(2023) 821; <https://doi.org/10.3390/mi14040821>
7. M. I. Afridi, Zhi-Min Chen, N. Riaz, **M. Qasim**, Utilization of two equation model for analysis of flow over a moving needle in the presence of magnetic field,

- ZAMM-Journal of Applied Mathematics and Mechanics, 103 (2023), e202200495, DOI: 10.1002/zamm.202200495.
8. M. I. Afridi, Zhi-Min Chen, N. Riaz, **M. Qasim**, Heat transfer and flow analysis over a linearly stretching sheet with constant wall temperature: Novel local non-similar solutions in the presence of viscous heating, ZAMM-Journal of Applied Mathematics and Mechanics e202300003, <https://doi.org/10.1002/zamm.202300003>
 9. M. I. Afridi, Zhi-Min Chen and **M. Qasim**, Numerical Chebyshev finite difference examination of Lorentz force effect on a dissipative flow with variable thermal conductivity and magnetic heating: Entropy generation minimization, ZAMM-Journal of Applied Mathematics and Mechanics, 102 (2022), e202200010, <https://doi.org/10.1002/zamm.202200010>
 10. M. U. Ashraf, **M. Qasim**, A. Wakif and M. I. Afridi, A generalized differential quadrature algorithm for simulating magnetohydrodynamic peristaltic flow of blood-based nanofluid containing magnetite nanoparticles: A physiological application, Numerical Methods for Partial Differential Equations, 38 (2022) 666-692, <https://doi.org/10.1002/num.22676>
 11. Z. H. Khan, W. A. Khan, **M. Qasim** and Min Du, Double-diffusive flow in a porous right-angle trapezoidal enclosure with constant heat flux, Mathematical Methods in Applied Sciences, 45 (2022) 3305-3317, <https://doi.org/10.1002/mma.7410>
 12. Z. H. Khan, W. A. Khan, **M. Qasim**, S. O. Alharbi, M. Hamid and M. Du, Hybrid nanofluid flow around a triangular-shaped obstacle inside a split lid-driven trapezoidal cavity, The European Physical Journal Special Topics, 231 (2022) 2749-2759.
 13. M. I. Afridi, M. U. Ashraf, **M. Qasim** and A. Wakif, Numerical simulation of entropy transport in the oscillating fluid flow with transpiration and internal fluid heating by GGDQM, Waves in Random and Complex Media, <https://doi.org/10.1080/17455030.2022.2067371>
 14. M. I. Afridi, A. Wakif, A. K. Alanazi, Zhi-Min Chen, **M. Qasim**, A comprehensive entropic scrutiny of dissipative flows over a thin needle featured by variable thermophysical properties, Waves in Random and Complex Media, <https://doi.org/10.1080/17455030.2022.2049922>
 15. M. I. Afridi, Zhi-Min Chen, T. E Karakasidis and **M. Qasim**, Local Non-Similar Solutions for Boundary Layer Flow over a Nonlinear Stretching Surface with Uniform Lateral Mass Flux: Utilization of Third Level of Truncation, Mathematics 2022, 10(21), 4159; <https://doi.org/10.3390/math10214159>
 16. **M. Qasim**, N. Riaz, Dianchen Lu and MI Afridi, Flow over a Needle Moving in a Stream of Dissipative Fluid Having Variable Viscosity and Thermal Conductivity, Arabian Journal for Science and Engineering, 46 (2021) 7295-7302.

17. **M. Qasim**, M. U. Ashraf, DC. Lu an Abid Hussanan, Influence of differently shaped copper nanoparticles in mixed convection flow through a curved wavy channel, *Alexandria Engineering Journal*, 60 (2021) 3305-3314.
18. Z. H. Khan, W. A. Khan, **M. Qasim**, S. O. Alharbi, L. Sun, Natural convection in triangular fin-shaped cavity with partially heated base using nanofluid, *ZAMM- Journal of Applied Mathematics and Mechanics/Zeitschrift für Angewandte Mathematik und Mechanik*, 101 (2021) e202000306.
19. N. Riaz, **M. Qasim**, M. I. Afridi, A. Hussanan, Analysis of three-dimensional stagnation point flow over a radiative surface, *International Communications in Heat and Mass Transfer*, 127 (2021) 105538.
20. Z. Ali, **M. Qasim**, M. U. Ashraf, Thermodynamic analysis of nonlinear convection in peristaltic flow, *International Communications in Heat and Mass Transfer*, 129 (2021) 105686.
21. M. S. Kausar, A. Hussanan, **M. Qasim** and M. Mamat, Flow of Water Based Nanofluid Containing Different Shapes of Cu Nanoparticles Embedded in a Porous Medium, *International Journal of Applied and Computational Mathematics*, 7, 107 (2021). <https://doi.org/10.1007/s40819-021-01042-1>
22. A. Hussanan, **M. Qasim**, Zhi-Min Chen, Heat transfer enhancement in sodium alginate based magnetic and non-magnetic nanoparticles mixture hybrid nanofluid, *Physica A: Statistical Mechanics and its Applications*, 550 (2020) 123957.
23. **M. Qasim**, N Riaz, Dianchen Lu and S Shafie, Three-dimensional mixed convection flow with variable thermal conductivity and frictional heating, *Communications in Theoretical Physics*, 72 (2020), 035003.
24. **M. Qasim**, Z. Ali, Dianchen Lu, U. Farooq, Investigation of Entropy in Two-Dimensional Peristaltic Flow with Temperature Dependent Viscosity, Thermal and Electrical Conductivity, *Entropy* 2020, 22(2), 200; <https://doi.org/10.3390/e22020200>.
25. S. Noreen, Qurat-ul-Ain, **M. Qasim**, D. Tripathi, Alteration in electro-osmotic flow through a non-Darcy porous medium due to MHD and peristaltic pumping, *Journal of Porous Media*, 22 (2020) 1639-1650.
26. DC. Lu, M. I. Afridi, U. Allauddin and **M. Qasim**, Entropy Generation in a Dissipative Nanofluid Flow under the Influence of Magnetic Dissipation and Transpiration, *Energies* 13 (2020) 5506.
27. W. N. Zaleha Amin, A. Qushairi, S. Shafie and **M. Qasim**, G-Jitter Fully Developed Heat and Mass Transfer by Mixed Convection Flow between Two Parallel Plates with Constant Heat Flux, *Sains Malaysiana* 49(2020):1201-1208
28. A. Qushairi, Z. Ismail, Nur Fatihah Mod Omar, **M. Qasim** and Lim yeou Jiann, Exact Solutions on Mixed Convection Flow of Accelerated Non-Coaxial Rotation of MHD Viscous Fluid with Porosity Effect, *Defect and Diffusion Forum* 399 (2020) 26-36.

29. S. Saleem, **M. Qasim**, A. Alderremy and S. Noreen, Heat transfer enhancement using different shapes of Cu nanoparticles in the flow of water based nanofluid, *Physica Scripta*, 95 (2020) 1-14.
30. **M. Qasim**, N Riaz, D Lu, M I Afridi, Mixed convection flow over a stretching sheet of variable thickness: Analytical and numerical solutions of self-similar equations, *Heat Transfer* 49 (2020), 3882-3899.
31. M. I. Afridi, T. A. Alkanhal, **M. Qasim** and I. Tlili, Entropy Generation in Cu-Al₂O₃-H₂O Hybrid Nanofluid Flow over a Curved Surface with Thermal Dissipation, *Entropy* 2019, 21(10), 941; <https://doi.org/10.3390/e21100941>.
32. **M. Qasim**, M. I. Afridi, A. Wakif and S. Saleem, Influence of Variable Transport Properties on Nonlinear Radioactive Jeffrey Fluid Flow Over a Disk: Utilization of Generalized Differential Quadrature Method, *Arabian Journal for Science and Engineering*, 44 (2019) 5987-5996.
33. **M. Qasim**, Z. Bhatti, A. Wakif and Z. Boulahia, Numerical Simulation of MHD Peristaltic Flow with Variable Electrical Conductivity and Joule Dissipation Using Generalized Differential Quadrature Method, *Communications in Theoretical Physics*, 71 (2019) 519.
34. M. I. Afridi, **M. Qasim**, A. Wakif, A. Hussanan, Second Law Analysis of Dissipative Nanofluid Flow over a Curved Surface in the Presence of Lorentz Force: Utilization of the Chebyshev--Gauss--Lobatto Spectral Method, *Nanomaterials*, 9 (2019), 195, <https://doi.org/10.3390/nano9020195>
35. A. Wakif, **M. Qasim**, M. I. Afridi, S. Saleem and M. M. Al-Qarni, Numerical Examination of the Entropic Energy Harvesting in a Magnetohydrodynamic Dissipative Flow of Stokes', Second Problem: Utilization of the Gear-Generalized Differential Quadrature Method, *Journal of Non-Equilibrium Thermodynamics* 44 (2019), 385-403.
36. I. Ullah, K. S. Nisar, S. Shafie, **M. Qasim** and A. Khan, Unsteady Free Convection Flow of Casson Nanofluid Over a Nonlinear Stretching Sheet, *IEEE Access* 7(2019):93076 – 93087.
37. M. I. Afridi, I. Tlili, **M. Qasim** and I. Khan, Non-linear Rosseland Thermal Radiation and Energy Dissipation Effects on Entropy Generation in CNTs Suspended Nanofluids Flow over a Thin Needle, *Boundary Value Problems*, 2019.
38. **M. Qasim**, M. I. Afridi and O. D. Makinde, Entropy Generation due to Heat and Mass Transfer in a Flow of Dissipative Elastic Fluid Through a Porous Medium, *Journal of Heat Transfer*, 141 (2019) 022002, 1-9.
39. M. I. Afridi and **M. Qasim**, Second Law Analysis of Blasius Flow with Nonlinear Rosseland Thermal Radiation in the Presence of Viscous Dissipation, *Power and Purpulsion Research*, 2019.
40. A. Wakif, Z. Boulahia, A. A. Amine, R. Sehaqui and **M. Qasim**, Magneto-Convection of Alumina - Water Nanofluid Within Thin Horizontal Layers Using

- the Revised Generalized Buongiorno's Model, *Frontiers in Heat and Mass Transfer* 12(2019) 1-15.
41. I. Khan, W. A. Khan, **M. Qasim**, I. Afridi and S. O. Alharbi, Thermodynamic Analysis of Entropy Generation Minimization in Thermally Dissipating Flow Over a Thin Needle Moving in a Parallel Free Stream of Two Newtonian Fluids, 21 (2019) *Entropy*, 74.
 42. **M. Qasim**, M. I. Afridi, A. Wakif, T. N. Thoi and A. Hussanan, Second Law Analysis of Unsteady MHD Viscous Flow over a Horizontal Stretching Sheet Heated Non-Uniformly in the Presence of Ohmic Heating: Utilization of Gear-Generalized Differential Quadrature Method, *Entropy* 2019, 21, 240; doi:10.3390/e21030240.
 43. A. Qushairi, N. Jaafar, S. Shafie, Z. Ismail and **M. Qasim**, Theoretical study on rotating Casson fluid in moving channel disk, *Journal of Physics: Conference Series* 1366 (2019) 012039.
 44. M. I. Afridi, **M. Qasim**, N. A. Khan and M. Hamdani, Heat Transfer Analysis of Cu--Al₂O₃--Water and Cu--Al₂O₃--Kerosene Oil Hybrid Nanofluids in the Presence of Frictional Heating: Using 3-Stage Lobatto IIIA Formula, *J. Nanofluids*, 8 (2019) 885, doi:10.1166/jon.2019.1626.
 45. F. Sultan, N. A. Khan, **M. Qasim** and M. I. Afridi, Numerical simulation of the flow of Nano-Eyring-Powell Fluid through a curved artery with time variant stenosis and aneurysm, *Nihon Reorji Gakkaisji*, 47 (2019) 75-85.
 46. W. N. Zaleha Amin, S. Shafie and M. Qasim, G-jitter induced mixed convection flow between two parallel plates with newtonian heating, *Science Proceedings Series* 1(2) 107-110.
 47. M. I. Afridi and **M. Qasim**, Entropy Generation in three-dimensional flow of dissipative fluid, *International Journal of Computational and Applied Mathematics*, 16 (2018)
 48. M. I. Afridi, **M. Qasim** and I. Khan, Entropy Generation in MHD Mixed Convection Stagnation-Point Flow in the Presence of Joule and Frictional Heating, *Case Studies in Thermal Engineering*, 12 (2018) 292-300.
 49. **M. Qasim** and M. I. Afridi, Comparative Study and Entropy Generation Analysis of Cu–H₂O and Ag–H₂O Nanofluids Flow Over a Slendering Stretching Surface, *Journal of Nanofluids*, 7 (2018) 783-790.
 50. M. I. Afridi, **M. Qasim**, O.D. Makinde and S. Shafie, Entropy Generation Analysis of Spherical and Non-Spherical Ag-Water Nanofluids in a Porous Medium with Magnetic and Porous Dissipation. *Journal of Nanofluids*, 7 (2018) 951-960.
 51. M. I. Afridi, **M. Qasim** and S. Saleem, Second Law Analysis of Three-Dimensional Dissipative Flow of Hybrid Nanofluid, *Journal of Nanofluids*, 7 (2018) 1272--1280.

52. U. Farooq, **M. Qasim**, M. I. Afridi and D. C. Lu, Transpiration and Viscous Dissipation Effects on Entropy Generation in Hybrid Nanofluid Flow over a Nonlinear Radially Stretching Disk, *Entropy*, 20 (2018) 668-681.
53. M. I. Afridi and **M. Qasim**, Second Law Analysis of Dissipative Flow over a Riga Plate with Non-Linear Rosseland Thermal Radiation and Variable Transport Properties, *Entropy*, 20 (2018) 615-621.
54. M. I. Afridi and **M. Qasim**, Entropy Generation Minimization in MHD Boundary Layer Flow over a Slendering Stretching Sheet in the Presence of Frictional and Joule Heating, *Journal of the Korean Physical Society*, 2018.
55. M. I. Afridi, **M. Qasim** and Sharidan Shafie, Entropy Generation in Hydromagnetic Boundary Flow under the Effects of Frictional and Joule heating: Exact Solutions, *European Journal of Physics Plus*. 2018.
56. M. I. Afridi, A. Wakif, **M. Qasim** and A. Hussanan, Irreversibility Analysis of Dissipative Fluid Flow Over A Curved Surface Stimulated by Variable Thermal Conductivity and Uniform Magnetic Field: Utilization of Generalized Differential Quadrature Method, *Entropy* 2018, 20, 943; doi:10.3390/e20120943.
57. M. I. Afridi and **M. Qasim**, Entropy generation and heat transfer in boundary layer flow over a thin needle moving in a parallel stream in the presence of nonlinear Rosseland radiation, *International Journal of Thermal Sciences*, 123 (2018) 117-128.
58. M.I. Afridi, **M. Qasim**, N.A. Khan and O.D. Makinde, Minimization of Entropy Generation in MHD Mixed Convection Flow with Energy Dissipation and Joule Heating: Utilization of Sparrow-Quack Boerner Local Non-Similarity Method, *Defect and Diffusion Forum*, 387 (2018) 63-77.
59. M.I. Afridi, **M. Qasim**, and O.D. Makinde, Minimization of Entropy Production in Three Dimensional Dissipative Flow of Nanofluid with Graphene Nanoparticles: A Numerical Study, *Defect and Diffusion Forum*, 387 (2018) 157-165.
60. **M. Qasim** and M. I. Afridi, Effects of Energy Dissipation and Variable thermal conductivity on Entropy Generation Rate in Mixed Convection Flow, *Journal of Thermal Science and Engineering Applications*, 2018.
61. M. I. Afridi, **M. Qasim**, I. Khan, S. Shafie and Ali Saleh Alshomrani, Entropy generation analysis of MHD mixed convection flow over an inclined stretching sheet, *Entropy* 19 (2017) 1-11.
62. Z. H. Khan, **M. Qasim**, Naeema Ishfaq and W. A. Khan, Dual solutions of Boundary layer flow of a micropolar fluid with weak concentration over a stretching/shrinking sheet, *Communications in Theoretical Physics*, 67 (2017) 449-457.
63. **M. Qasim**, R U Haq, Z. H. Khan, Closed form dual solutions of flow and heat transfer over a stretching/shrinking sheet in a porous medium, *Chinese Journal of Physics*, 55 (4) (2017) 1284-1293.

64. **M. Qasim**, Z. H. Khan, I. Khan and Qasem M. Al. Mdallal, Analysis of entropy generation in flow of Methanol-Based Nanofluid in a sinusoidal wavy channel, *Entropy*, 19 (2017) e19100490.
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