

# CURRICULUM VITAE



## PERSONAL DETAILS

Name: Tehseen Abbas  
Father's Name: Abdul Rahim  
Qualification: Ph.D.  
Designation: Assistant Professor Mathematics (**HEC Approved Supervisor**)  
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House Address: House No. S.A 235/c, Street No. 9, Magistrate Colony,  
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## ACADEMIC RECORD

Degree	Subject	Institution	Year
Ph.D	Mathematics	Quaid-i-Azam University Islamabad	2018
M.Phil	Mathematics	Quaid-i-Azam University Islamabad	2013
BS Hons	Mathematics	International Islamic University Islamabad	2011
F.Sc	Mathematics, Physics, Chemistry	Govt. Asghar Mall College, Rawalpindi	2005
Matric	Mathematics, Physics, Chemistry, Computer	New Siddique Public School	2003

## **FIELDS OF RESEARCH**

Waves Mechanics, Numerical and Analytical Solution of Partial Differential Equations and Boundary Value Problem

## **RESEARCH/ TEACHING EXPERIENCE**

1. Two-year research experience as a Junior Research Associate (JRA), Department of Mathematics QAU Islamabad from Aug 2011-July 2013.
2. Working as Senior Research Associate (SRA), Department of Mathematics QAU Islamabad, from Aug 2014 to Feb 2018.
3. Worked as a **Visiting** Lecturer in University of Arid Agriculture, Rawalpindi, from 2<sup>nd</sup> September 2013 to 5<sup>th</sup> Feb 2014.
4. Worked as **Visiting** Lecturer in Department of Computer Science, Federal Urdu University, Islamabad, from 28<sup>th</sup> March 2014 to 15<sup>th</sup> Sep 2018.
5. Worked as a **Visiting** Lecturer in University of Arid Agriculture, Rawalpindi, from 5<sup>th</sup> September 2015 to 3<sup>rd</sup> Feb 2016.
6. Worked as **Visiting** Lecturer in Department of Mathematics, Quaid I Azam University, Islamabad, from 28<sup>th</sup> Feb 2016 to 19<sup>th</sup> Feb 2017.
7. Worked as an Assistant Professor **Visiting** in Department of Computer Science, Bahria University, Islamabad, from 8<sup>th</sup> Feb 2016 to 29<sup>th</sup> Aug 2016.
8. Worked as an Assistant Professor **Visiting** in Department of Mathematics, Quaid I Azam University, Islamabad, from 27<sup>th</sup> Mar 2018 to 15<sup>th</sup> Sep 2018.
9. Worked as a **Full time** Lecturer Mathematics in Al-Muslim Science College from 3<sup>rd</sup> Sep 2013 to 16<sup>th</sup> Oct 2018.
10. Working as an Assistant Professor Mathematics (TTS-19) in University of Education, Lahore, Faisalabad campus, Faisalabad, from 17<sup>th</sup> Oct 2018 **to date**.

## **M.PHIL THESIS TITLE**

“Effect of partial slip and Hall current in Flows of an Oldroyd-B fluid”.

## **Ph.D THESIS TITLE**

“On steady flows due to a Riga surface”.

## **PAPERS PUBLISHED/SUBMITTED FOR THE POSSIBLE PUBLICATIONS**

1- Ayub, M., **Abbas, T.**, & Bhatti, M. M. (2016). Inspiration of slip effects on electromagnetohydrodynamics (EMHD) nanofluid flow through a horizontal Riga plate. *The European Physical Journal Plus*, 131(6), 1-9.

- 2- Abbas, T.**, Ayub, M., Bhatti, M. M., Rashidi, M. M., & Ali, M. E. S. (2016). Entropy Generation on Nanofluid Flow through a Horizontal Riga Plate. *Entropy*, 18(6), 223.
- 3- Bhatti, M. M., Abbas, T.**, Rashidi, M. M., Ali, M. E. S., & Yang, Z. (2016). Entropy Generation on MHD Eyring–Powell Nanofluid through a Permeable Stretching Surface. *Entropy*, 18(6), 224.
- 4- Bhatti, M. M., Abbas, T.**, Rashidi, M. M., & Ali, M. E. S. (2016). Numerical Simulation of Entropy Generation with Thermal Radiation on MHD Carreau Nanofluid towards a Shrinking Sheet. *Entropy*, 18(6), 200.
- 5- Bhatti, M. M., Abbas, T.**, & Rashidi, M. M. (2016). A New Numerical Simulation of MHD Stagnation-Point Flow Over a Permeable Stretching/Shrinking Sheet in Porous Media with Heat Transfer. *Iranian Journal of Science and Technology, Transactions A: Science*, 1-7.
- 6- Khan, M. I., Kiyani, M. Z., Malik, M. Y., Yasmeen, T., Khan, M. W. A., & Abbas, T.** (2016). Numerical investigation of magnetohydrodynamic stagnation point flow with variable properties. *Alexandria Engineering Journal*.
- 7- Hayat, T., Abbas, T.**, Ayub, M., Farooq, M., & Alsaedi, A., Flow of nanofluid due to convectively heated Riga plate with variable thickness. *Journal of Molecular Liquids*.
- 8- Bhatti, M. M., Abbas, T.**, & Rashidi, M. M. (2016). Effects of thermal radiation and electromagnetohydrodynamic on viscous nanofluid through a riga plate. *Multidiscipline Modeling in Materials and Structures*, 12(4).
- 9- Hayat, T., Abbas, T.**, Ayub, M., Muhammad, T., & Alsaedi, A. (2016). On Squeezed Flow of Jeffrey Nanofluid between Two Parallel Disks. *Applied Sciences*, 6(11), 346.
- 10- Bhatti, M. M., Abbas, T.**, & Rashidi, M. M. (2016). Numerical Study of Entropy Generation with Nonlinear Thermal Radiation on Magnetohydrodynamics non-Newtonian Nanofluid Through a Porous Shrinking Sheet. *Journal of Magnetism*, 21(3), 468-475.
- 11- Bhatti, M. M., Abbas, T.**, & Rashidi, M. M. (2016). Entropy Generation as a Practical Tool of Optimisation for non-Newtonian Nanofluid Flow through a Permeable Stretching Surface using SLM. *Journal of Computational Design and Engineering*.
- 12- Abbas, T.**, & Rashidi, M. M. ENTROPY ANALYSIS ON TITANIUM MAGNETO-NANOPARTICLES SUSPENDED IN WATER BASED NANOFUID: A NUMERICAL STUDY. *Computational Thermal Sciences: An International Journal*.
- 13- Hayat, T., Abbas, T.**, & Alsaedi, A, Exact solutions for flows of an Oldroyd-B fluid with Hall current and slip condition. **(Submitted)**

**14-** Hayat, T., **Abbas, T.**, & Alsaedi A., Exact solutions for rotating flows of Generalized Burger's Fluid in porous space with slip condition. **(Submitted)** Journal of Zeitschrift Fur Naturforschung A.

**15-** Hayat, T., **Abbas, T.**, Ayub, M., Farooq, M., & Alsaedi, A., Double stratification and chemical reaction effects in stagnation point flow of a nanofluid by a Riga plate with variable thickness. **(Submitted)** Chinese Physics B.

**16-** MM Bhatti, M Sheikholeslami, A Shahid, M Hassan, **T. Abbas** Entropy generation on the interaction of nanoparticles over a stretched surface with thermal radiation Colloids and Surfaces A: Physicochemical and Engineering Aspects 570, 368-376

**17-** E Jalali, O Ali Akbari, MM Sarafraz, **T. Abbas**, MR Safaei, Heat transfer of oil/MWCNT nanofluid jet injection inside a rectangular microchannel Symmetry 11 (6), 757

**18-** R Ellahi, A Zeeshan, F Hussain, **T. Abbas**, Two-phase couette flow of couple stress fluid with temperature dependent viscosity thermally affected by magnetized moving surface, Symmetry 11 (5), 647

**19-** R Ellahi, A Zeeshan, F Hussain, **T. Abbas**, Thermally charged MHD bi-phase flow coatings with non-Newtonian nanofluid and hafnium particles along slippery walls. Coatings 9 (5), 300

**20-** A Zeeshan, N Shehzad, **T. Abbas**, R Ellahi, Effects of radiative electro-magnetohydrodynamics diminishing internal energy of pressure-driven flow of titanium dioxide-water nanofluid due to entropy generation Entropy 21 (3), 236

**21-** M Zubair, M Ijaz, **T. Abbas**, A Riaz, Analysis of modified Fourier law in flow of ferromagnetic Powell–Eyring fluid considering two equal magnetic dipoles, Canadian Journal of Physics 97 (7), 772-776

**22-** MA Yousif, HF Ismael, **T. Abbas**, R Ellahi, Numerical study of momentum and heat transfer of MHD Carreau nanofluid over an exponentially stretched plate with internal heat source/sink and radiation, Heat Transfer Research 50 (7)

**23-** R Ellahi, A Zeeshan, F Hussain, **T. Abbas**, Study of shiny film coating on multi-fluid flows of a rotating disk suspended with nano-sized silver and gold particles: A comparative analysis, Coatings 8 (12), 422

- 24-** A Zeeshan, N Ijaz, **T. Abbas**, R Ellahi, The sustainable characteristic of bio-bi-phase flow of peristaltic transport of MHD Jeffrey fluid in the human body, *Sustainability* 10 (8), 2671
- 25-** MM Bhatti, SR Mishra, **T. Abbas**, MM Rashidi, A mathematical model of MHD nanofluid flow having gyrotactic microorganisms with thermal radiation and chemical reaction effects, *Neural Computing and Applications* 30 (4), 1237-1249
- 26-** SR Mishra, PK Pattnaik, MM Bhatti, **T. Abbas**, Analysis of heat and mass transfer with MHD and chemical reaction effects on viscoelastic fluid over a stretching sheet, *Indian Journal of Physics* 91 (10), 1219-1227
- 27-** **T. Abbas**, T Hayat, M Ayub, MM Bhatti, A Alsaedi, Electromagnetohydrodynamic nanofluid flow past a porous Riga plate containing gyrotactic microorganism, *Neural Computing & Applications*
- 28-** **T. Abbas**, MM Bhatti, M Ayub, Aiding and opposing mixed convection Casson nanofluid flow with chemical reaction through a porous Riga plate, *Journal of Process Mechanical Engineering*
- 29-** MM Bhatti, **T. Abbas**, MM Rashidi, Effects of thermal radiation and electromagnetohydrodynamic on viscous nanofluid through a Riga plate *Multidiscipline Modeling in Materials and Structures*
- 30-** MM Bhatti, **T. Abbas**, MA Abbas, MM Rashidi, Analytic Study of Peristaltic Blood Flow of Ellis Fluid through a Compliant Channel
- 31-** R Ellahi, A Zeeshan, F Hussain, **T Abbas**. Two-phase couette flow of couple stress fluid with temperature dependent viscosity thermally affected by magnetized moving surface *Symmetry* 11 (5), 647, 2019
- 32-** MM Bhatti, A Shahid, **T Abbas**, SZ Alamri, R Ellahi. Study of activation energy on the movement of gyrotactic microorganism in a magnetized nanofluids past a porous plate *Processes* 8 (3), 328, 2020
- 33-** MNH Mat, NZ Asmuin, MFM Basir, **T Abbas**, MSM Kasihmuddin. Influence of nozzle area ratio on the gas-particle flow for single-hose dry ice blasting nozzle *Journal of Thermal Analysis and Calorimetry* (2020), 2020
- 34-** LA Khan, NA Mir, **T Abbas**, S Farooq, M Farooq. Irreversibility of mixed convection peristalsis flow of nanofluid under the influence of heat mass flux with slip and thermal radiation *Journal of Thermal Analysis and Calorimetry* (2020), <https://doi.org/10.1007 ...>, 2020

**35-** C Fetecau, D Vieru, **T Abbas**, R Ellahi. Analytical Solutions of Upper Convected Maxwell Fluid with Exponential Dependence of Viscosity under the Influence of Pressure Mathematics 9 (4), 334, 2021

**36-** A Riaz, **T Abbas**, A Zeeshan, MH Doranehgard Entropy generation and MHD analysis of a nanofluid with peristaltic three dimensional cylindrical enclosures International Journal of Numerical Methods for Heat & Fluid Flow, 2021

**37-** A Riaz, **T Abbas**, AQ ul Ain. Nanoparticles phenomenon for the thermal management of wavy flow of a Carreau fluid through a three-dimensional channel Journal of Thermal Analysis and Calorimetry 143 (3), 2395-2410, 2021

**38-** MR Safaei, I Tlili, E Gholamalizadeh, **T Abbas**, TA Alkanhal, M Goodarzi. Thermal analysis of a binary base fluid in pool boiling system of glycol–water alumina nano-suspension. Journal of Thermal Analysis and Calorimetry 143 (3), 2453-2462, 2021

### **DISTINCTIONS/ FELLOWSHIP/SCHOLARSHIP**

1. Received Three years Merit Scholarship during PhD from Quaid-i-Azam University, Islamabad.
2. 1<sup>st</sup> Position in M. Phil (Merit list) Quaid-i-Azam University, Islamabad.
3. Received two years Merit Scholarship from Quaid-i-Azam University Islamabad in M. Phil.
4. 1<sup>st</sup> position in (Merit list) IIU, Islamabad.
5. Received four years Merit based Scholarship from IIU, Islamabad.

### **International Journal Reviewer**

1. SciTechnol
2. International Journal of molecular liquids
3. Powder Technology
4. Entropy
5. ASME Journal of Heat Transfer (USA)
6. Neural Computing and Applications
7. Advances in Applied Mathematical Methods and Mechanics
8. Results in Physics
9. Journal of Process Mechanical Engineering
10. Applied Sciences
11. Advances in Mechanical Engineering
12. Journal of Taibah University for Science KSA
13. Journal of thermal science and calorimetry
14. Symmetry
15. Mathematics
16. Coatings
17. Wave and Complex Media
18. Sustainability

19. International Journal of Ambient Energy
20. Plos One
21. Heliyon
22. Frontier in Physics
23. Scientia Iranica
24. Results in Physics
25. Canadian Journal of Physics

### **CONFERENCES/SEMINARS ATTENDED**

1. 4<sup>th</sup> International Conference on Mathematical Models and Methods in Fluid Mechanics August 3-5-9, 2010, Auditorium Complex Faisal Masjid International Islamic University, Islamabad, Pakistan.
2. 5<sup>th</sup> International Conference on Recent Developments in Fluid Mechanics, June 24 to 26, 2013, Quaid-i-Azam University, Islamabad-Pakistan.
3. 7<sup>th</sup> International conference on Recent Development in Fluid Mechanics and Environmental Sciences, Feb 13-15, 2018.

### **SEMINAR DELIVERED**

- 5<sup>th</sup> International Conference on Conference on Recent Developments in Fluid Mechanics, June 24 to 26, 2013, Quaid-i-Azam University, Islamabad-Pakistan.
- 7<sup>th</sup> International conference on Recent Development in Fluid Mechanics and Environmental Sciences, Feb 13-15, 2018.

### **Supervision/Co-supervision PhD Thesis (completed/in progress)**

1. Zulfiqar Ali PhD Mathematics Mohi-ud-Din Islamic University Azad Kashmir. **(In progress)**

### **Supervision/Co-supervision M.S. Thesis (completed/in progress)**

1. Nasir Mehmood MS Mathematics Ripha International University Faisalabad. **(Completed)**
2. Samina Ibrahim MS Mathematics Ripha International University Faisalabad. **(Completed)**
3. Ather Mehmood MS Mathematics Ripha International University Faisalabad. **(Completed)**
4. Ghulam Asghar MS Mathematics Ripha International University Faisalabad. **(Completed)**
5. Farooq Ahmed MS Mathematics Ripha International University Faisalabad. **(Completed)**

6. Saba Sadiq MS Mathematics Ripha International University Faisalabad. **(Completed)**
7. Faisal Malik MS Mathematics Ripha International University Faisalabad. **(Completed)**
8. Muhammad Usman MS Mathematics Ripha International University Faisalabad. **(Completed)**
9. Iqra Ahmed Ali MS Mathematics University of Education, Lahore Faisalabad campus. **(In progress)**
10. Kamal Yawer MS Mathematics University of Education, Lahore Faisalabad campus. **(In progress)**
11. Zain ul Abidin Khan MS Mathematics University of Education, Lahore Faisalabad campus. **(In progress)**
12. Muhammad Tahir MS Mathematics University of Education, Lahore Faisalabad campus. **(In progress)**
13. Nimra Lateef MS Mathematics University of Education, Lahore Faisalabad campus. **(In progress)**
14. Tasmia Rafiq MS Mathematics University of Education, Lahore Faisalabad campus. **(In progress)**
15. Rabia Basri MS Mathematics University of Education, Lahore Faisalabad campus. **(In progress)**

### **Supervision/B.S. Thesis**

1. Muhammad Farhan (BS 2017-2021) Mathematical Model of micropolar fluid over a shrinking sheet **(Completed)**
2. Mubeen Qamar (BS 2017-2021) Slip effects of fluid over a Riga surface. **(Completed)**
3. Ali Aousaf (BS 2017-2021) Boundary layer flow of viscous fluid over shrinking sheet. **(Completed)**
4. Mughees ur Rehman (BS 2017-2021) Study of fluid flow of fluid flow over a Riga sheet. **(Completed)**
5. Muhammad Rehman Ijaz (BS 2018-2022) Study of nanofluid flow with MHD and slip effects on Riga Sheet. **(Completed)**
6. Abdul Islam Afzal (BS 2018-2022) Influence of slip effects on nanofluids over a Riga surface. **(Completed)**
7. Naveed Karamat (BS 2018-2022) Inspiration of Activation energy and chemical impacts over a viscous fluid. **(Completed)**
8. Hijab Zahra (BS 2018-2022) Study of nanofluid flow with MHD effects and activation energy on Riga surface. **(Completed)**



## **INTERNATIONAL COLLABORATORS**

**1. Dr. A. H. Kara**

Professor School of Mathematics  
University of the Witwatersrand P  
Bag 3, Wits, 2050 **South Africa**  
Email: [Abdul.Kara@wits.ac.za](mailto:Abdul.Kara@wits.ac.za)

**2. Dr. F. M. Mahomed**

Professor School of Computational & Applied Mathematics  
Centre for Differential Equations, Continuum Mechanics and Applications  
University of the Witwatersrand  
Wits 2050, Johannesburg, **South Africa**  
Email [fazal.mahomed@wits.ac.za](mailto:fazal.mahomed@wits.ac.za)

**3. Dr. M. M. Bhatti**

Shanghai Institute of Applied Mathematics and Mechanics,  
Shanghai University, Shanghai **China**.  
Email: [muhammad09@shu.edu.cn](mailto:muhammad09@shu.edu.cn)

## **NUMBER OF COURSES THAT CAN BE TAUGHT AT BS/ M.Sc LEVEL**

1. Calculus
2. Ordinary differential equations
3. Numerical Analysis
4. Linear Algebra
5. Real Analysis
6. Complex Analysis
7. Partial differential equations
8. Multivariable Calculus

## **REFERENCES**

1. **Dr. Muhammad Ayub (Ph.D Supervisor)**  
Professor Department of Mathematics QAU, Islamabad,  
**Pakistan.**  
Email: [mayub59@yahoo.com](mailto:mayub59@yahoo.com)
  
2. **Dr. Rahmat Ellahi (Fulbright Fellow)**  
Associate Professor Department of Mathematics and  
Statistics International Islamic University Islamabad,  
**Pakistan.**  
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[rellahi@engr.ucr.edu](mailto:rellahi@engr.ucr.edu), [r.ellahi@iiu.edu.pk](mailto:r.ellahi@iiu.edu.pk)
  
3. **Dr. Sohail Nadeem**  
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Islamabad, **Pakistan.**  
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