Mohammad Sanjeed Hasan

Curriculum Vitae

Ground Floor
461/A
South Kafrul, Dhaka 1206
✆ +8801675128240
✉ sanjeedlhasan@gmail.com

Career Objective

I am looking for a research position in the field of Applied Mathematics or Mechanical Engineering, where I have the scope to utilize my potentiality, adaptability and skills to do something innovative and from where I will be able to share my knowledge in the field of mathematics for the sake of mankind.

Research Interests

- Fluid Dynamics and Heat Transfer
- Computational Fluid Dynamics (CFD)
- Curved Channel Flow and Heat Transfer
- Numerical & Experimental Analysis
- Mathematical Modeling

Professional Experience

5th June 2017-5th October 2017 (Contractual)
Lecturer, Department of Mathematics and Statistics, Bangladesh University of Business and Technology, Dhaka, Bangladesh.

Teaching Experience

Teaching experience (Mathematics courses) in the undergraduate level at 'Bangladesh University of Business and Technology (BUBT)', Dhaka, 2017.

Research Experience

July 2015 to June 2017
Research experience as a **Research Associate** in the research project funded by Bangladesh Ministry of Education (MoEdu) entitled ***Flow Instability with Convective Heat Transfer through a Rotating Curved Micro-Channel with Strong Curvature*** under Prof. Dr. Rabindra Nath Mondal, Dept. of Mathematics, Jagannath University, Dhaka.

July 2017 to Jun 2018	Research experience as a **Research Associate** in the research project funded by Bangladesh Ministry of Science and Technology (MOST) entitled ***Flow Transitions with Effects of Secondary Flow on Convective Heat Transfer through a Rotating Curved Channel*** under Prof. Dr. Rabindra Nath Mondal, Dept. of Mathematics, Jagannath University, Dhaka.

Papers and Publications

Published Papers

Journal Papers

20 **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, Giulio Lorenzini, *Physics of Bifurcation of the Flow and Heat Transfer through a Curved Duct with Natural and Forced Convection*, Chinese Journal of Physics, Elsevier, 67: 428-457, 2020.

19 **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, Giulio Lorenzini, *Coriolis force effect in steady and unsteady flow characteristics with convective heat transfer through a curved square duct*, International Journal of Mechanical Engineering, 5 (1): 1-40, 2020.

18 **Mohammad Sanjeed Hasan**, Md. Sirajul Islam, Md. Faisal Badsha, Rabindra Nath Mondal, Giulio Lorenzini, *Numerical Investigation on the Transition of Fluid Flow Characteristics Through a Rotating Curved Duct*, International Journal of Applied Mechanics and Engineering, 25(3): 45-63, 2020.

17 **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, Giulio Lorenzini, *Numerical Prediction of Non-isothermal Flow with Convective Heat Transfer Through a Rotating Curved Square Channel with Bottom Wall Heating and Cooling from the Ceiling*, International Journal of Heat and Technology, 37(3): 710-726, 2019.

16 **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, Giulio Lorenzini, *Centrifugal Instability with Convective Heat Transfer through a Tightly Coiled Square Duct*, Mathematical Modelling of Engineering Problems, 6(3): 397-408, 2019.

15 Samir Chandra Ray, **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, *On the Onset of Hydrodynamic Instability with Convective Heat Transfer Through a Rotating Curved Rectangular Duct*, Mathematical Modelling of Engineering Problems, 7(1): 31-44, 2020.

14 Ratan Kumar Chanda, **Mohammad Sanjeed Hasan**, Md. Mahmud alam, Rabindra Nath Mondal, *Hydrothermal Behavior of Transient Fluid Flow and Heat Transfer Through a Rotating Curved Rectangular Duct with Natural and Forced Convection*, Mathematical Modelling of Engineering Problems, 7(4): 501-514, 2020.

13 Laisa Mahtarin Iva, **Mohammad Sanjeed Hasan**, Sanjit Kumar Paul, Rabindra Nath Mondal, *MHD free convection heat and mass transfer flow over a vertical porous plate in a rotating system with hall current, heat source and suction*, Int. J. Adv. Appl. Math. and Mech., 5(4): 49–64, 2018.

12 Mohsen Izadi, Iman Shahivand, S. A. M. Mehryan, **Mohammad Sanjeed Hasan**, Giulio Lorenzini, *Magneto-hydrodynamic Flow of Micropolar Nanofluid Containing Motile Microorganisms Passing over a Vertical Stretching Sheet with magnetic field dependent Viscosity*, Journal of Engineering Thermophysics, 29(4): 632–656, 2020.

11 Muhammad Minarul Islam, Md. Tusher Mollah, **Mohammad Sanjeed Hasan**, Md. Mahmud Alam, *Numerical Solution of Unsteady Viscous Compressible Fluid Flow along a Porous Plate with Induced Magnetic Field*, AMSE JOURNALS-AMSE IIETA publication-2017-Series: Modelling B, 86: 850-863, 2017.

10 Muhammad Minarul Islam, **Mohammad Sanjeed Hasan**, *A study on exact solution of the telegraph equation by (G'/G)-expansion method*, African Journal of Mathematics and Computer Science Research, 11(7): 103-108, 2018.

Conference Proceedings Papers

9 **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, Giulio Lorenzini, *Centrifugal-Coriolis instability through a rotating curved square duct with bottom wall heating and cooling from the ceiling*, AIP Conference Proceedings 2324, 040007 (2021)

8 **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, Shinichiro Yanase, *Numerical Prediction of Unsteady Fluid Flow and Heat Transfer through a Stationary Curved Square Duct*, AIP Conference Proceedings 2324, 050020 (2021)

7 **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, Toshinori Kouchi, Shinichiro Yanase, *Hydrodynamic Instability with Convective Heat Transfer through a Curved Channel with Strong Rotational Speed*, AIP Conference Proceedings, 2121, 030006 (2019).

6 **Mohammad Sanjeed Hasan**, Muhammad Minarul Islam, Samir Chandra Ray, Rabindra Nath Mondal, *Bifurcation Structure and Unsteady Solutions through a Curved Square Duct with Bottom Wall Heating and Cooling from the Ceiling*, AIP Conference Proceedings 2121, 050003 (2019).

5 Shamsun Naher Dolon, **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, *Non-isothermal flow with convective heat transfer through a curved duct for various aspect ratios*, AIP Conference Proceedings 2324, 050014 (2021)

4 Shamsun Naher Dolon, **Mohammad Sanjeed Hasan**, Ratan Kumar Chanda, Rabindra Nath Mondal, *Numerical study of unsteady fluid flow through a tightly coiled rectangular duct of large aspect ratio*, AIP Conference Proceedings 2324, 040006 (2021)

3 Mst. Nasrin Sultana, **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, *A Numerical Study of Unsteady Heat and Fluid Flow through a Rotating Curved Channel with Variable Curvature*, AIP Conference Proceedings 2121, 030009 (2019).

2 Shamsun Naher Dolon, **Mohammad Sanjeed Hasan**, Samir Chandra Ray, Rabindra Nath Mondal, *Vortex-Structure of Secondary Flows with Effects of Strong Curvature on Unsteady Solutions through a Curved Rectangular Duct of Large Aspect Ratio*, AIP Conference Proceedings 2121, 050004 (2019).

1 Md. Nahidul Islam, Samir Chandra Ray, **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, *Pressure-driven Flow Instability with Convective Heat Transfer through a Rotating Curved Rectangular Duct with Differentially Heated Top and Bottom Walls*, AIP Conference Proceedings 2121, 030011 (2019).

Accepted Papers

3 **Mohammad Sanjeed Hasan**, Shamsun Naher Dolon, Himadri Shekhar Chakraborty, Rabindra Nath Mondal, Giulio Lorenzini, *Numerical Investigation on Flow Transition through a Curved Square Duct with Negative Rotation*, Journal of Applied and Computational Mechanics, accepted (8th August, 2020).

2 Ratan Kumar Chanda, **Mohammad Sanjeed Hasan**, Md. Mahmud alam, Giulio Lorenzini, Rabindra Nath Mondal, *Effects of Rotation and Curvature Ratio on Fluid Flow and Energy Distribution through a Rotating Curved Rectangular Channel*, Journal of Engineering Thermophysics, accepted (2nd February, 2021).

1 Ratan Kumar Chanda, **Mohammad Sanjeed Hasan**, Md. Mahmud alam, Rabindra Nath Mondal, *Taylor-Heat Flux Effect on Fluid Flow and Heat Transfer in a Curved Rectangular Duct with Rotation*, International Journal of Applied and Computational Mathematics, accepted (28th February, 2021).

Conference Papers (Oral Presentation)

6 **Mohammad Sanjeed Hasan**, Ratan Kumar Chanda, Rabindra Nath Mondal, *Time-dependent Flow with Convective Heat Transfer through a Curved Square Channel*, 21th International Mathematics Conference, University of Dhaka, Bangladesh, 8-10 December, 2019.

5 Shamsun Naher Dolon, **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, *Effects of Aspect Ratio on Unsteady Fluid Flow and Convective Heat Transfer through a Curved Rectangular Duct of Strong Curvature*, 21th International Mathematics Conference, University of Dhaka, Bangladesh, 8-10 December, 2019.

4 Ratan Kumar Chanda, **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, *Effects of Rotation on Unsteady Fluid Flow and Heat Transfer through a Curved Rectangular Duct with Bottom Wall Heating and Cooling from the Ceiling*, 21th International Mathematics Conference, University of Dhaka, Bangladesh, 8-10 December, 2019.

3 Selim Hussen, **Mohammad Sanjeed Hasan**, Rabindra Nath Mondal, *Two-dimensional Steady Flow and Unsteady Solutions through a Curved Square Duct*, 21th International Mathematics Conference, University of Dhaka, Bangladesh, 8-10 December, 2019.

2 **Mohammad Sanjeed Hasan**, Md Shakil Aman and Rabindra Nath Mondal, *Flow Instability with Convective Heat Transfer through a Curved Square Duct with Heating the Lower Wall and Cooling from the Ceiling*, 20th International Mathematics Conference, University of Dhaka, Bangladesh, 8-10 December, 2017.

1 Maksuda Akter Sawpna, **Mohammad Sanjeed Hasan** and Rabindra Nath Mondal, *Unsteady Fluid Flow and Heat Transfer through a Rotating Curved Duct with Differentially Heated Vertical Sidewalls*, 20th International Mathematics Conference, University of Dhaka, Bangladesh, 8-10 December, 2017.

Academic Awards

2019 Awarded as **DEAN'S AWARD FOR SCHOLASTIC EXCELLENCE** for securing the **outstanding academic achievement for the 1st position** in Bachelor of Science in Mathematics examination From the Faculty of Science.

2018	Awarded as **Prime Minister Gold Medal 2015** for securing the **highest Marks/CGPA** in Bachelor of Science in Mathematics examination From the Faculty of Science.
2013	Awarded as **Superior Performance in the 5th National Undergraduate Mathematics Olympiad**, (Khulna Region).

Education

Master of Science

Uuniversity	Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, Bangladesh.
Department	Mathematics
Subject	Applied Mathematics
Session	*2016-2017*
Result	*3.90 (GPA out of 4.0 scale)*
Position	**1st class 2nd position** in order of merit.
Medium of Instruction	English
Major Studied Courses	Fluid Dynamics, Advanced Numerical Analysis, Magneto-Hydrodynamics, Operations Research, Astrophysics, Industrial Mathematics, Thermodynamics and Statistical Mechanics, Theory of Relativity.

Masters thesis

Title	*Numerical Study of Non-isothermal Flows with Convective Heat Transfer through a Curved Square Duct with Heating the Lower Wall and Cooling from the Ceiling.*

Bachelor of Science

Uuniversity	Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, Bangladesh.
Department	Mathematics
Subject	Mathematics
Session	*2011-2015*
Result	*3.67 (GPA out of 4.0 scale)*
Position	**1st class 1st position** in order of merit.
Achievement	**Prime Minister Gold Medal** *2015*
	DEAN'S Award *2019*
Medium of Instruction	English

Major Courses Studied	Basic Algebra and Trigonometry, Geometry in Two Dimension, Geometry in Three Dimension, Calculus-I, Calculus-II, Linear Algebra, Ordinary Differential Equation, Partial Differential Equation, Vector and Tensor Analysis, Real Analysis-I, Real Analysis-II, Discrete Mathematics, Programming With Fortran, Programming With Fortran Lab, Abstract Algebra, Complex Analysis, Mechanics, Classical Mechanics, Quantum Mechanics, Mathematical Methods, General Topology, Theory of Numbers, Numerical Analysis, Numerical Analysis Lab, Linear Programming, Lattice Theory, Hydrostatics and Hydrodynamics, Astronomy, Integral Equations, Differential Geometry, Mathematical Modeling in Biology, Rings and Modules, Wavelet Analysis.

Project Thesis

Title	*A Comparative Study on Exact Solution of The Sawada-Kotera and Degasperis-Procesi Equations by (G′/G)-Expansion Method.*

Higher Secondary Certificate

College	Adamjee Cantonment College, Dhaka.
Group	Science
Passing Year	*2011*
Board	Dhaka
Result	*4.30 (GPA out of 5.0 scale)*

Secondary School Certificate

School	Bangladesh Navy School, Dhaka.
Group	Science
Passing Year	*2009*
Board	Dhaka
Result	*5.00 (GPA out of 5.0 scale)*

Computer skills

Intermediate	HTML, LaTeX, Microsoft Windows, Microsoft Office
Programming Language	MATLAB, Maple,C/C++,Programming with FORTRAN

Communication Skills

2017	Oral Presentation at the 20th International Mathematics Conference
2018	Oral Presentation at the 8th International Conference on Thermal Engineering
2019	Oral Presentation at the 21th International Mathematics Conference
2019	Oral Presentation at the 13th International Conference on Mechanical Engineering

Language Skill

Bengali	Mothertongue

| English | Intermediate (IELTS Score:5.5) | *Conversationally fluent* |

References

- **Dr. Rabindra Nath Mondal**
  Professor
  Chairman & Dean
  Department of Mathematics & Faculty of Science,
  Jagannath University, Dhaka, Bangladesh.
  Contact no: +880-1710851580
  Email: rnmondal71@yahoo.com

- **Dr. Dipankar Kumar**
  Assistant Professor & Chairman,
  Department of Mathematics,
  Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, Bangladesh.
  Contact no: +880-1722285442
  Email: dks.bsmrstu@gmail.com

Signature

— — — — — — — — — — —

Mohammad Sanjeed Hasan