Dr. Anandamoy Mukhopadhyay

Associate Professor, Department of Mathematics,
Vivekananda Mahavidyalaya (under The University of Burdwan),
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Personal Profile

I am currently an Associate Professor in the Dept. of Mathematics, Vivekananda Mahavidyalaya. I have completed my PhD from The University of Burdwan. My primary research interest lies in the field of Fluid Mechanics. In Fluid mechanics my interests are in fluid flows on the microscale concentrating on thin film theories, the effects of porous media and electromagnetism. I focus on the development of mathematical models to solve challenging applied mathematics problems. My research group uses both analytical and numerical techniques to solve the fluid flow problems.

Education

1. Ph.D. in Mathematics (2012)
   The University of Burdwan, West Bengal, India
   Thesis: Studies of some problems on hydrodynamical stability of a thin liquid film

2. M.Phil in Mathematics (2003)
   Specialization: Applied Mathematics
   University of Calcutta, West Bengal, India
   Secured the first position
   Thesis: Some aspects of Cauchy-Poisson problem

3. M.Sc in Mathematics (1990)
   Specialization: Applied Mathematics
   The University of Burdwan, West Bengal, India
   Secured the second position

4. B.Sc in Mathematics (1988)
   The University of Burdwan, West Bengal, India
   Secured the second position

Publications (Details are given in Annexure - I)

1. Journal Publications: **10** (International)

2. Conference Publication: **01** (International)

Research Project (Details are given in Annexure - II)

1. Completed: **02**

Research Guidance (Details are given in Annexure - III)

1. Ph.D: **01** (Ongoing)

Teaching Experience (24 years)

Institution/Organization	University	Designation	Duration
Vivekananda Mahavidyalaya	The University of Burdwan	Associate Professor	01.11.2012− Present
Vivekananda Mahavidyalaya	The University of Burdwan	Lecturer (SG)	01.08.2007 − 01.11.2012
Vivekananda Mahavidyalaya	The University of Burdwan	Senior Lecturer	01.08.2002 − 01.08.2007
Vivekananda Mahavidyalaya	The University of Burdwan	Lecturer	01.08.1997 − 01.08.2002

Academic Achievements

1. Qualified CSIR NET (Dec, 1990) conducted by UGC and CSIR

2. Qualified GATE 1990 in Mathematics conducted by IIT and IISc Bangalore

People

Collaborators of published/accepted papers

- **Amlan K. Barua**
  Assistant Professor, Department of Mathematics,
  Indian Institute of Technology Dharwad,
  Dharwad, Karnataka 580011, India
  abarua@iitdh.ac.in (✉)

- **Souradip Chattopadhyay**
  Senior Research Fellow, Department of Mathematics,
  Indian Institute of Technology Dharwad,
  Dharwad, Karnataka 580011, India
  sdipmath@gmail.com (✉)

- **Amar K. Gaonkar**
  Assistant Professor, Department of Mechanical, Materials and Aerospace Engineering,
  Indian Institute of Technology Dharwad,
  Dharwad, Karnataka 580011, India
  amar.gaonkar@iitdh.ac.in (✉)

- **Sanghasri Mukhopadhyay**
  Doctoral student, Laboratoire LOCIE,
  Universite Savoie Mont Blanc,
  Chambery 73000, France
  sanghasri.mukhopadhyay@univ-smb.fr (✉)

- **Asim Mukhopadhyay**
  Associate Professor, Department of Mathematics,
  Vivekananda Mahavidyalaya (under The University of Burdwan),
  Purba Bardhaman, West Bengal 713103, India
  as1m_m@yahoo.co.in (✉)

- **Bhabani Shankar Dandapat**
  Professor (retired), Physics and Applied Mathematics Unit,
  Indian Statistical Institute,
  Kolkata, West Bengal 700108, India

Declaration

I hereby declare that the information given above is true to the best of my knowledge and belief.

Anandamoy Mukhopadhyay

Dr. Anandamoy Mukhopadhyay
July 30, 2021.

List of publications of Anandamoy Mukhopadhyay

1. **Effects of strong viscosity with variable fluid properties on falling film instability**
   - NODYCON 2021 (Second Nonlinear dynamics conference), (Accepted)
   - DOI:
   - Authors: **A. Mukhopadhyay**, S. Chattopadhyay, A. K. Barua
   - Year of publication: 2021

2. **Thermocapillary instability on a film falling down a non-uniformly heated slippery incline**
   - International Journal of Non-Linear Mechanics, Vol. 133, pp. 103718
   - DOI: 10.1016/j.ijnonlinmec.2021.103718
   - Authors: S. Chattopadhyay, **A. Mukhopadhyay**, A. K. Barua, A. K. Gaonkar
   - Year of publication: 2021

3. **Stability of thin film flowing down the outer surface of a rotating non-uniformly heated vertical cylinder**
   - Nonlinear Dynamics, Vol. 100(2), pp. $1143 - 1172$
   - DOI: 10.1007/s11071-020-05558-x
   - Authors: **A. Mukhopadhyay**, S. Chattopadhyay, A. K. Barua
   - Year of publication: 2020

4. **A Review on Hydrodynamical Stability of Thin Film Flowing Along an Inclined Plane**
   - Journal of Mathematical Sciences and Modelling, Vol. 2(2), pp. $133 - 142$
   - DOI: 10.33187/jmsm.458359
   - Authors: S. Chattopadhyay, **A. Mukhopadhyay**, A. K. Barua
   - Year of publication: 2019

5. **Stability of thin liquid film flowing down a rotating horizontal or inclined plane by momentum-integral method**
   - European Journal of Mechanics - B/Fluids, Vol. 75, pp. $58 - 70$
   - DOI: 10.1016/j.euromechflu.2018.12.002
   - Authors: **A. Mukhopadhyay**, S. Chattopadhyay, A. K. Barua
   - Year of publication: 2019

6. **Long wave instability of thin film flowing down an inclined plane with linear variation of thermophysical properties for very small Biot number**
   - International Journal of Non-Linear Mechanics, Vol. 100, pp. $20 - 29$
   - DOI: 10.1016/j.ijnonlinmec.2018.01.005
   - Authors: **A. Mukhopadhyay**, S. Chattopadhyay
   - Year of publication: 2018

7. **Instabilities of Thin Viscous Liquid Film Flowing down a Uniformly Heated Inclined Plane**
   - Journal of Heat and Mass Transfer Research, Vol. 3(2), pp. $77 - 87$
   - DOI: 10.22075/jhmtr.2015.345
   - Authors: **A. Mukhopadhyay**, S. Mukhopadhyay, A. Mukhopadhyay
   - Year of publication: 2016

8. **Stability of a thin viscous fluid film flowing down a rotating non-uniformly heated inclined plane**
   - Acta Mechanica, Vol. 216, pp. $225 - 242$
   - DOI: 10.1007/s00707-010-0350-5
   - Authors: A. Mukhopadhyay, **A. Mukhopadhyay**
   - Year of publication: 2011

9. **Stability of conducting viscous film flowing down an inclined plane with linear temperature variation in the presence of a uniform normal electric field**
   - International Journal of Heat and Mass Transfer, Vol. 52 (3-4), pp. $709 - 715$
   - DOI: 10.1016/j.ijheatmasstransfer.2008.06.043
   - Authors: A. Mukhopadhyay, **A. Mukhopadhyay**
   - Year of publication: 2009

10. **Stability of conducting liquid flowing down an inclined plane at moderate Reynolds number in the presence of constant electromagnetic field**
    - International Journal of Non-Linear Mechanics, Vol. 43, pp. $632 - 642$
    - DOI: 10.1016/j.ijnonlinmec.2008.02.008
    - Authors: A. Mukhopadhyay, B. S. Dandapat, **A. Mukhopadhyay**
    - Year of publication: 2008

11. **Nonlinear stability of viscous film flowing down an inclined plane with linear temperature variation**
    - Journal of Physics D Applied Physics, Vol. 40, pp. $5683 - 5690$
    - DOI: 10.1088/0022-3727/40/18/025
    - Authors: A. Mukhopadhyay, **A. Mukhopadhyay**
    - Year of publication: 2007

Annexure − II

List of research projects of Anandamoy Mukhopadhyay

1. Project nature: Minor Research Project
   Grant No: F PSW - 025/11 - 12 (ERO), dated 03.08.2011
   Title: Investigation of few problems on hydrodynamic instability of thin liquid film flowing along an inclined plane
   Total grant approved: 1,42,000/-
   Status: Completed

2. Project nature: Minor Research Project
   Grant No: PSW/20/06 - 07 (ERO), dated 06.11.2006
   Title: Modeling of finite amplitude long wave instability of a thin film flowing down an inclined plane
   Total grant approved: 65,000/-
   Status: Completed

Annexure − III

List of research guidance

- Currently supervising following student's doctoral research:
  1. Souradip Chattopadhyay (Dept. of Math, IIT Dharwad, Karnataka, India) on *Falling film instability* with Dr. Amlan K. Barua (Dept. of Math, IIT Dharwad, Karnataka, India)

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