# Dipak Barman

*Curriculum Vitae*

## Personal Information


Name – Dr. Dipak Barman
S/o – Dwijen Barman (Father)
Chabi Barman (Mother)
Marital Status – Unmarried
Date of Birth – 10$^{th}$ Feb, 1992
Citizenship – Indian
Home Address – Vill.: Kharija Dash Gram, P.O.: Gobra Chhara,
P.S.: Dinhata, Cooch Behar, West Bengal – 736135, India
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## Complete Academic Qualifications

**2021** **Ph. D. (Mathematics),**
**National Institute of Technology Warangal (NITW), Telangana, India,**
Thesis Title – *Linear Stability Analysis of Viscous and Nanofluid Flows in Horizontal/Vertical Channels*,
Supervisor – Prof. D. Srinivasacharya,
Period – December-2017 to September-2021.

**2015** **M. Sc. (Mathematics),**
**Indian Institute of Technology Guwahati (IITG), Guwahati, India,**
Cumulative Performance Index (CPI) –7.57(Scale of 10.00),
M. Sc. Project – *A Study on the Generalized Minimal Residual (GMRES) Method*,
Advisor – Prof. Durga Charan Dalal,
Period – July-2013 to June-2015.

**2013** **B. Sc., Mathematics (Honours),**
**Dinhata College, Dinhata, Cooch Behar, West Bengal, India,**
Under University of North Bengal,
Percentile Marks - 65.625,
Period – July-2010 to July-2013

**2010** **Higher Secondary, Sciences**
**Nigamnagar Nigamananda Saraswat Vidyalaya, Dinhata, West Bengal, India,**
Under West Bengal Council of Higher Secondary Education,
Percentile Marks - 77.2,
Period – June-2008 to June-2010.

**2008** **Secondary,**
**Nayarhat High School, Dinhata, West Bengal, India,**
Under West Bengal Board of Secondary Education,
Percentile Marks – 65,
Period – June-2006 to May-2008.

## Teaching Experience

**June-2023** to **Till date** Assistant Professor, Department of Mathematics, Rajiv Gandhi University, Rono Hills, Itanagar, Arunachal Pradesh, India.

## Research Interests

Computational Fluid Dynamics

- Hydrodynamics Stability
- Flow Through Porous Media
- Convective Heat and Mass Transfer
- Nanofluid Flows

## Achievements

2023-2025 Selected as an **IPDF** in the Dept. of Mathematics at **IIT Madras**
June 2018 **UGC NET (JRF)**, AIR - 194, awarded by CSIR
June 2017 **UGC NET (JRF)**, AIR - 209, awarded by CSIR
Dec. 2016 **UGC NET (Lectureship)**, AIR - 141, awarded by CSIR
2015 **GATE**, AIR - 508, organized by IIT Kanpur
2013 **JAM**, AIR - 881, organized by IIT Delhi
2013-2015 Recipient of the Institute Merit-cum-Means/ SC-ST scholarship at Indian Institute of Technology Guwahati, Assam

## Relevant Coursework

- **Postgraduate credits at Indian Institute of Technology Guwahati, Assam**

| | |
|---|---|
| Discrete Mathematics | Theory of Computation |
| Computer Programming | Functional Analysis |
| Modern Algebra | Numerical Analysis |
| Linear Algebra | Calculus of Variations & optimal Control |
| Real Analysis | Integral Transforms & Integral Equations |
| Data Structures and Algorithms | Numerical Linear Algebra |
| Differential Equations | Numerics of Partial Differential Equations |
| Complex Analysis | Fluid Dynamics |
| Optimization Techniques | Finite Elements methods for PDEs |
| Probability Theory | |

- **Ph.D. credits at National Institute of Technology Warangal, Telangana**

  Advanced Fluid Dynamics
  Advanced Numerical Methods
  English for Scientific Communication
  Convective Heat and Mass Transfer
  Computational Methods in Fluid Dynamics

## Additional Coursework

- I completed an online Swayam course "**A Refresher Course on Calculus**" during December 2018 to February 2019 organized by National Institute Technology Warangal sponsored by **Ministry of Human Resource Development** (MHRD), Government of India.

## Skill Set

- **Programming Languages & Miscellaneous Tools:**
  - MATLAB, Mathematica
  - C, C++, Python
  - LATEX, Microsoft Office

- **Operating System Environments:**
  - Linux, Windows

- **Language Skill:**
  - Bengali, English, Hindi, Assamese

## Publications appeared in refereed Journals

Author(s)|Title |Name of Journal|VolumePage|Year

13. **Dipak Barman*** & D. Srinivasacharya, Linear stability of longitudinal convective rolls in a non-Darcy porous layer filled with nanofluid due to viscous dissipation effect, ***Thermal Science and Engineering Progress*** (Elsevier), 43:101942, 2023 **(SCI), (IF: 4.56)**. doi: 10.1016/j.tsep.2023.101942.

12. **Dipak Barman***, Linear stability analysis of a high permeable vertical porous channel filled with nanofluid in the presence of internal heat source effect, ***Journal of Engineering Mathematics*** (Springer), 140:11, 2023 **(SCI),** (**IF: 1.444**). doi: 10.1007/s10665-023-10275-6.

11. Susmay Nandi* & **Dipak Barman**, Unsteady MHD hybrid nano-fluid flow over a convectively heated nonlinear stretching cylinder with velocity slip: A comparative study, ***International Journal of Modern Physics B*** (World Scientific), Accepted, 2023 **(SCI),** (**IF: 1.404**).

10. **Dipak Barman*** & D. Srinivasacharya, Effect of variable gravity on the onset of convection in a Brinkman porous medium under convective boundary conditions, ***International Communications in Heat and Mass Transfer*** (Elsevier), 144:106777, 2023 **(SCI),** (**IF: 6.782**). **doi:** 10.1016/j.icheatmasstransfer.2023.106777.

9. Pankaj Barman, D. Srinivasacharya & **Dipak Barman***, Linear and nonlinear stability analyses of double-diffusive convection in a porous layer due to magnetic field and throughflow effects, ***The European Physical Journal Plus*** (Springer), 138(3):277, 2023 **(SCI)**, (**IF: 3.758**). doi: 10.1140/epjp/s13360-023-03888-4.

8. D. Srinivasacharya* & **Dipak Barman**, The effect of local thermal non-equilibrium and magnetic field on the stability in a vertical channel filled with nanofluid, ***Special Topics & Reviews in Porous Media — An International Journal*** (Begell House), 14(1):29–48, 2023**(ESCI)**, doi: 10.1615/SpecialTopicsRevPorousMedia.2022039435.

7. D. Srinivasacharya* & **Dipak Barman**, Influence of magnetic field on the stability of double diffusive nanofluid convection in a vertical porous channel, ***Journal of Porous Media*** (Begell House), 25(9):1-16, 2022 (**SCI**) (**IF: 1.752**).
doi: 10.1615/JPorMedia.2022039056.

6. D. Srinivasacharya* & **Dipak Barman**, Effect of local thermal non-equilibrium on the stability of the flow in a vertical channel filled with nanofluid saturated porous medium, ***Journal of Heat Transfer- Transactions of the ASME***, 144(1):014501, 2022(**SCI**) (**IF: 2.021**), doi: 10.1115/1.4052580.

5. D. Srinivasacharya* & **Dipak Barman**, The effect of changeable gravity field on the stability of convection in a porous layer filled with nanofluid: Brinkman model, ***Computational Thermal Sciences*: *An International Journal*** (*Begell House*) 13(6):1-17, 2021(**ESCI**), doi: 10.1615/ComputThermalScien.2021038043.

4. **Dipak Barman** & D. Srinivasacharya***,** The variable gravity field and viscous dissipation effects on the convective instability in a porous layer with throughflow: Brinkman Model, ***Journal of Porous Media*** (*Begell House*), 24(6):1-13, 2021 (**SCI**) (**IF: 1.752**), doi: 10.1615/JPorMedia.2021036098.

3. D. Srinivasacharya* & **Dipak Barman,** Linear stability of convection in a vertical channel filled with nanofluid saturated porous medium, ***Heat Transfer*** (*Wiley*), 50(4):3220-3239, 2021 (**ESCI**), doi: 10.1002/htj.22025.

2. S. Darbhasayanam* & **Dipak Barman,** The variable gravity field and viscous dissipation effects on the double diffusive and Soret driven convective instability in a porous layer with throughflow, ***International Communications in Heat and Mass Transfer*** (*Elsevier*), 120:105050, 2021 (**SCI**) (**IF: 5.683**),
doi: 10.1016/j.icheatmasstransfer.2020.105050.

1. **Dipak Barman** & D. Srinivasacharya***,** Stability of nanofluid flow in a vertical porous channel, ***Special Topics & Reviews in Porous Media — An International Journal*** (*Begell House*), 11(5):477–491, 2020 (**ESCI**),
doi: 10.1615/SpecialTopicsRevPorousMedia.2020032568.

## Papers/ Submitted/ Under Reviewed

1. **Dipak Barman*** & D. Srinivasacharya, The effect of local thermal non-equilibrium on the stability analysis due to the presence of variable gravity field with throughflow, Chinese Journal of Physics, Under Review **(SCI)**.

## FDP/STTPs/GAINs/Workshops/Webinars attended

- Participated in the two-week online GAIN course on "**Linear and Non-linear Hydrodynamic Stability: Theory and Computation**" organized by the Dept. of Mathematics, NIT Warangal, Telangana, India, during $10^{th}$ – $23^{rd}$ April, 2022.
- Participated a one day online National Symposium on "**Mathematical Modelling of Industrial Problems**" on the Eve of International Mathematics Day organized by the Dept. of Mathematics, NIT Warangal, Telangana, India, $14^{th}$ March, 2022.
- Participated in a one-week online collaborative Faculty Development Program on "**Role of Basic Sciences in Emerging Technologies (RBSET - 2022)**" organized jointly National Institute of Technology Mizoram and GRM Institute of Technology, Rajam, Andhra Pradesh from $9^{th}$ – $14^{th}$ March, 2022.
- Participated in the International Webinar Series on "**Bio-Mathematical Modelling of Epidemics: Focus on Covid-19**" organized by the Dept. of Mathematics, Brahmananda Keshab Chandra College, Barasat, West Bengal, India, during $25^{th}$ – $26^{th}$ June, 2020.
- Participated in the National Webinar on "**Fluid Dynamics**" organized by the Dept. of Mathematics and Statistics, School of Basic Science, Manipal University, Jaipur, India, on $23^{rd}$ June, 2020.
- Participated in the one-week Workshop on "**Teaching and Learning of Engineering Mathematics using Python through Hands-On Experience**" organized by the Dept. of Mathematics in association with the Teaching Learning Centre, NIT Warangal, India, during $5^{th}$ – $10^{th}$ March, 2019.
- Participated in the one-week STTP Programme on "**Mathematical Modeling & Numerical Techniques in Engineering and Science**" organized by the Dept. of Mathematics, NIT Warangal, Telangana, India, during $9^{th}$ – $13^{th}$ October, 2018.
- Participated in the two-week GAIN course on "**Separation and Instabilities in High-Speed Flows**" organized by the Dept. of Mathematics, NIT Warangal, Telangana, India, during $6^{th}$ – $17^{th}$ August, 2018.

## National/ International Conferences attended

- Linear stability of double diffusion convection in a vertical channel filled with nanofluid saturated porous medium with magnetic effect, $2^{nd}$ International Conference on Numerical Heat Transfer and Fluid Flow **NHTFF-2020**, Jan 17-19, 2020, NIT Warangal, Telangana, India.
- Linear stability of mixed convection in a vertical channel filled with nanofluid saturated porous medium, International Conference of $64^{th}$ congress on **ISTAM-2019**, Dec 9-12, 2019, IIT Bhubaneswar, Odisha, India.
- Linear stability of mixed convection in a vertical channel filled with nanofluid saturated porous medium: Brinkman Model, International Conference on Applied Mathematics and Computational Sciences **ICAMCS-2019**, Oct 17-19, 2019, DIT University, Dehradun, Uttarakhand, India.
- Stability of nanofluid in a horizontal channel filled with porous medium using Brinkman model, National Conference on Computational Modeling of Fluid Dynamics Problem **CMFDP-2019**, Jan 18-20, 2019, NIT Warangal, Warangal, Telangana, India.
- Participated National Conference on Mathematical Analysis and Mathematical Modelling **MAMM-2018**, Dec 7-8, 2018, The Calcutta Mathematical Society, Kolkata, India.

## Major Additional Responsibilities

- **Organizing committee member**, 2nd International Conference on Numerical Heat Transfer and Fluid Flow **NHTFF-2020**, Jan 17-19, 2020, NIT Warangal, Telangana, India.
- **Organizing committee member**, National Conference on Computational Modeling of Fluid Dynamics Problem **CMFDP-2019**, Jan 18-20, 2019, NIT Warangal, Warangal, Telangana, India.

## Reviewer of few Journals

- International Journal of Modern Physics C
- International Journal of Ambient Energy

## Declaration

I hereby declare that the information finished above is true to the best of my knowledge.

Date: 29.06.2023 Signature

## References

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