

CURRICULUM VITAE

Objective

Willing to obtain a responsible, challenging and a growth oriented position in an organization where I would get opportunity to explore my potential and skills to the best of its limit and learn new things.

Personal Details

Name	Dr. Virendra Kumar
Date of Birth	May, 1984
Permanent Address	Village and Post Kaluwala- Pahadipur (Jahanpur), PS-Biharigarh, District-Saharanpur (U.P.)–247129
Mailing Address	Assistant Professor, Department of Mathematics, Central University of Tamil Nadu, Thiruvarur - 610 101
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Academic Qualifications

Doctor of Philosophy (Ph. D.)	2013, Mathematics NIT Hamirpur (Himachal Pradesh), India
Master of Science (M. Sc.)	2007, Mathematics H.N.B. Garhwal University (A Central University) Srinagar (Garhwal), Uttarakhand, India
Bachelor of Science (B. Sc.)	2004, Physics, Chemistry, Mathematics C.C.S. University Meerut (U.P.), India

Professional Experience

- **June, 2016–Present**, Assistant Professor at Department of Mathematics, School of Mathematics and Computer science, *Central University of Tamil Nadu Thiruvarur*, India
- **August, 2014–May, 2016**, National Board for Higher Mathematics (NBHM) **Postdoctoral Fellow** at Department of Mathematics, *IIT Roorkee*, India
- **September, 2013–May, 2014**, National Board for Higher Mathematics (NBHM) **Postdoctoral Fellow** at *JNCASR, Bengaluru*, India
- **October, 2012–August, 2013**, Research Associate at *JNCASR, Bengaluru*, India

Area of Specialization

- Mathematical Modeling Using Continuum Models, Bio Fluid Mechanics, Nano-fluidic Suspension of Small Particles, Mathematical Modeling of various Effects on Bio convection

Research Interests

- Bioconvection in a Suspension Different Kind of Micro-organisms, Flow Through Porous Media, Linear/Non-linear and Over stability Analysis, Perturbation Techniques

Awards and Recognitions

- Awarded Post Doctoral Fellowship by **National Board for Higher Mathematics (NBHM)**, Department of Atomic Energy, Government of India, India, **2013**
- Awarded **Research Associate Fellowship** by **JNCASR Bengaluru** India, **2012**

Membership of Professional Societies

- Life member of the Indian Mathematical Society (IMS)
- Life member of the Indian Society of Theoretical & Applied Mechanics (ISTAM)
- Life member of the Indian society for Heat and Mass Transfer (ISHMT)
- Life member of the Calcutta Mathematical Society

Research Guidance

- Srikanth K. (2023)

Computational Skills and Teaching Experience

- Working experience in operating systems using **Windows, MS Office, Linux and text processing using LATEX, MS-word**
- Working experience in mathematical software package **PYTHON FORTRAN, MATLAB, MATHCAD, MATHEMATICA**
- **Subjects Taught at CUTN Thiruvarur:**
Numerical Analysis, Engineering Mathematics, Linear Algebra, ODE, Complex Analysis, Optimization Technique, Fluid Dynamics, Differential Geometry

Publications

Sr. No.	Publications (Category wise)	Numbers
1.	International Peer Reviewed Journals	9*
2.	International Conferences	6*
3.	National Conferences	5*
4.	Conferences/Workshops/Summer Schools/STTP Attended	14*

*(For details please see list of Publications, **Annexure-I**)

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

Date: Aug. 4, 23
Place: Thiruvarur

(Dr. Virendra Kumar)

Annexure-I

Publications in international peer reviewed journals

1. **Virendra Kumar, K. Srikanth and D Grover (2023)**, Darcy-Brinkman Analysis of Thermo-vibrational Convection in Gyrotactic Swimmers: An Overstability Theory, **Journal of Thermal Analysis and Calorimetry (Springer)** (DOI: 10.1007/s10973-023-12383-y). [Impact Factor: 4.755]
2. **Virendra Kumar & K. Srikanth (2022)**, Vertically oscillated gyrotactic bio-thermal convection in a porous media, **Forces in Mechanics (Elsevier)**, **9**, 100136.
3. **Virendra Kumar & K. Srikanth (2021)**, An overstability analysis of vertically vibrated suspension of active swimmers subjected to thermal stratification, **SN Applied Sciences (Springer)**, **3**, 612. [Impact Factor: 2.6]
4. **Virendra Kumar & Y.D. Sharma (2014)**, Instability Analysis of Gyrotactic Microorganisms: A Combined Effect of High-frequency Vertical Vibration and Porous Media, **Transport in Porous Media (Springer)**, **102**, 153–165. [Impact Factor: 2.7]
5. **Y.D. Sharma & Virendra Kumar (2012)**, The Effect of High-frequency Vertical Vibration in a Suspension of Gyrotactic Microorganisms, **Mechanics Research Communications (Elsevier)**, **44**, 40–46. [Impact Factor: 2.4]
6. **D. Grover, Virendra Kumar & Dinkar Sharma (2012)**, A Comparative Study of Numerical Techniques and Homotopy Perturbation Method for Solving Parabolic Equation and Non-Linear Equations, **International Journal for Computational Methods in Engineering Science and Mechanics (Taylor & Francis)**, **13**, 403–407. [Impact Factor: 1.1]
7. **Y.D. Sharma & Virendra Kumar (2012)**, Effect of High-frequency Vertical Vibration in a Suspension of Negatively Geotactic Microorganisms Saturating a Porous Medium, **International Journal of Applied Mathematics and Mechanics**, **8**, 47–58.
8. **Y.D. Sharma & Virendra Kumar (2011)**, The Onset of Bioconvection in Presence of Suspended Particles Saturating a Porous Medium, **International Journal of Applied Mathematics and Mechanics**, **7**, 72–82.
9. **Y.D. Sharma & Virendra Kumar (2011)**, Overstability Analysis of Thermo-bioconvection Saturating a Porous Medium in a Suspension of Gyrotactic Microorganisms, **Transport in Porous Media (Springer)**, **90**, 673–685. [Impact Factor: 2.7]

Paper Presentations in International Conferences

1. Paper entitled “Bioconvection in Porous Media: The Effect of Small Particles” by **Virendra Kumar** was presented in the **CONIAPS–XIII (In Young Scientist Award Session)** held at **University of Petroleum & Energy Studies Dehradun (U.K.)**, June 14–16, **2011**.
2. Paper entitled “Oscillatory Convection in a Suspension of Gyrotactic Microorganisms Saturating a Porous Medium” by **Virendra Kumar & Y.D. Sharma** was presented in the **Ninth International Congress on Thermal Stresses (TS–2011)** held at **Budapest University of Technology and Economic, Hungary**, June 5–9, **2011**.
3. Paper entitled “The Effect of Small Particles in a Suspension of Gyrotactic Microorganisms Saturating a Porous Medium” by **Y.D. Sharma & Virendra Kumar** was published in the proceedings of **Ninth International Congress on Thermal Stresses (TS–2011)** held at **Budapest University of Technology and Economic, Hungary**, June 5–9, **2011**.
4. Paper entitled “Vertical Vibrations Analysis in a Suspension of Negatively Geotactic Microorganisms in a Horizontal Porous Layer” by **Virendra Kumar** was presented in the **55th Congress of ISTAM – 2010** held at **National Institute of Technology Hamirpur (H.P.)**, December 18–21, **2010**.

5. Paper entitled “A Comparative Study of Numerical Techniques and Homotopy Perturbation Method for Solving Parabolic Equation” by **Deepak Grover, Virendra Kumar & Dinkar Sharma** was presented in the **55th Congress of ISTAM–2010** held at **National Institute of Technology Hamirpur (H.P.)**, December 18–21, **2010**.
6. Paper entitled “A Nonlinear Stability Analysis of a Magnetized Ferrofluid Heated From Below in Presence of Suspended Particles” by **Virendra Kumar & Y.D. Sharma** was presented in the **IMST–2009 FIM XIII** held at **Jaypee University of Information Technology Wagnaghat, Solan (H.P.)**, August 2–4, **2009**.

Paper Presentations in National Conferences

1. Paper entitled “Overstability Analysis of Thermo-bioconvection Saturating a Porous Medium” by **Virendra Kumar & Deepak Grover** was published in the proceedings of national Conference on *National conferences in Advances in Mathematics & its applications (CAMA–2011)* held at **D.A.V. College, Bathinda (P.B.)**, February 25–26, **2011**.
2. Paper entitled “Effect of Rotation in Elastic Media with Voids” by **Deepak Grover & Virendra Kumar** was published in the proceedings of national Conference on *National conferences in Advances in Mathematics & its applications (CAMA–2011)* held at **D.A.V. College, Bathinda (P.B.)**, February 25–26, **2011**.
3. Paper entitled “The Onset of Bioconvection in a Suspension of Gyrotactic Microorganisms in Porous Fluid Layer Heated From Below” by **Virendra Kumar, Y.D. Sharma & Deepak Grover** was presented in the national conference on *National Meet of Research scholars in Mathematical Science (NMRSMS–2010)* held at **Indian Institute of Technology Madras (T.N.)**, October 11–15, **2010**.
4. Paper entitled “Perturbation Solution of Waves in Rotating Thermoelastic Media” by **Deepak Grover, J.N. Sharma & Virendra Kumar** was presented in the national conference on *National Meet of Research scholars in Mathematical Science (NMRSMS–2010)* held at **IIT Madras (T.N.) Indian Institute of Technology Madras (T.N.)**, October 11–15, **2010**.
5. Paper entitled “A Nonlinear Stability Analysis for Rotating Magnetized Ferrofluid Heated From Below in Presence of Dust Particles” by **Y.D. Sharma, Sunil & Virendra Kumar** was published in the proceedings of national Conference on *Advances in Mathematics and Application (AMA–2008)* held at **National Institute of Technology Hamirpur (H.P.)**, December 19–21, **2008**.

Refresher/Orientation/Workshops/Summer Schools/Short Term Courses Attended

1. Participated in “**2nd Refresher Course on Computational and Mathematical Science**”, held at **UGC HRDC, Jamia Millia Islamia University, Delhi**, January 15-28, **2020**.
2. Participated in Teachers Enrichment Workshop on “**Linear Algebra & Multivariable Calculus**”, held at **Mepco Schlenk Engineering College Sivakasi, Tamil Nadu**, May 13–19, **2019**.
3. Participated in “**99th Orientation Course**”, held at **UGC HRDC, University of Hyderabad, Hyderabad**, July 6-August 2, **2017**.
4. Participated in “**Teachers STEM Workshop on Research Based Pedagogical tools (RBPTs)**”, held at **IISER PUNE**, February 26–March 1, **2017**.
5. Participated in NPDE–TCA Advanced level workshop on “**Advanced Workshop on Hyperbolic PDEs: Theory, Numerics & Applications and Conference on Partial Differential Equations (HPTNA-2014 & CPDE-2014)**”, held at **The LNM Institute of Information Technology, Jaipur**, December 01-11, **2014**.
6. Participated in NPDE–TCA Advanced level workshop on “**Advanced Workshop & Symposium on Stability Analysis of Differential Equations with Applications to Fluid Flow Problems (SADEAFFP–2014)**” held at **Department of Mathematics and Statistics, Indian Institute of Technology Kanpur**, March 20–24, **2014**.

7. Participated in “*DST–SERC School on Nonlinear Dynamics*”, held at **Department of Physics, Panjab University, Chandigarh (U.T.)**, January 27–February 18, **2014**.
8. Participated in NPDE–TCA Advanced level workshop on “*Advanced Workshop on Computational Methods for Integral Equations & Applications (AWCMIEA–2014)*”, held at **Department of Mathematics and Statistics, Indian Institute of Technology Kanpur**, January 13–17, **2014**.
9. Participated in NPDE–TCA Advanced level workshop on “*Stabilization Methods for Singularly Perturbed Differential Equations (SPDE–2013)*”, held at **Supercomputer Education and Research Centre (SERC), Indian Institute of Science Bangalore**, October 03–05, **2013**.
10. Participated in “*Advanced Instructional School in Numerical Analysis (2012) [AIS– Numerical Analysis (2012)]*”, held at **Panjab University, Chandigarh (U.T.)**, June 18–July 07, **2012**.
11. Participated in “*National Workshop on Plasma Surface Interactions and Processing (NWPSIP–09)*”, held at **National Institute of Technology Hamirpur (H.P.)**, May 25–27, **2009**.
12. Participated in “*Workshop on Usages of E–Resources*”, held at **National Institute of Technology Hamirpur (H.P.)**, August 09, **2008**.
13. Participated in Workshop on “*VLSI & Communication System*”, held at **National Institute of Technology Hamirpur (H.P.)**, June 05–06, **2008**.
14. Participated in Short term course on “*CAD/CAM & Optimization Techniques*”, held at **National Institute of Technology Hamirpur (H.P.)**, June 02–13, **2008**.
15. Participated in “*Celebration of 50th Community Service Program (CSP–50), Information & Communication Technology in the Service of Society*”, held at **National Institute of Technology Hamirpur (H.P.)**, May 02–05, **2008**.
16. Participated in “*2nd Summer School on Mathematics Education through Instructional Workshop for Undergraduate & Postgraduate Students*”, held at **G.B. Pant Engineering College, Pauri Garhwal (U.A.)**, June 04–16, **2007**.

Conferences Attended

1. Participated in “*International Congress of Mathematicians (ICM–2010)*” held at **University of Hyderabad (A.P.)**, August 19–27, **2010**.
2. Participated in “*53rd Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)*”, held at **University College of Engineering (A), Osmania University Hyderabad (A.P.)**, December 27–30, **2008**.