

Name of Faculty Dr. Palle Kiran

Designation Assistant Professor

Nature of Job/Appointment Regular

Date of Joining 24-06-2019

E-mail pallekiran_maths@cbit.ac.in



Education Qualifications	Name of the Degree	Class
Ph. D	Doctor of Philosophy	Awarded
M.Phil	Master of Philosophy	First
PG	M. Sc. (Applied Mathematics)	Second
UG	B.Sc.	First

Work Experience

Teaching	06 Years
Research	03 years
Industry	--
Others	--

Area of Specialization Fluid Dynamics

Professional Memberships Life Member IASED

Responsibilities held at Institution Level

1. Research Coordinator (R & E)
2. Member, Anti Ragging Committee

Responsibilities held at Department Level

1. Member, Course Expert Group
2. Course Audit Coordinator
3. Member, Anti Ragging Committee
4. Coordinator of R& E

Research Guidance

Awards Received

1. Received NBHM Post doctoral fellowship (2016-2019)
2. GATE 2014 (SCORE 230)
3. AP/TS SET 2014.
4. Best paper award received at NCSET-VIT Chennai Nov-, 7, 8 2016.

Courses Handled at Under Graduate / Post Graduate Level.

1. Engineering Mathematics I
2. Engineering Mathematics II,
3. Engineering Mathematics III,
4. Applied Mathematics
5. Complex analysis. Real analysis, Numerical methods using C language Linear algebra, Fluid Mechanics

No. of Papers Published

National Journals –02	International Journals – 61
National Conference –02	International Conference – 04

Projects Carried out --

Patents --

Invited Speaker

1. LUSCON 2014 "Talk:- Weakly nonlinear double diffusive oscillatory convection in a viscoelastic fluid layer under gravity modulation" BBA University, Lucknow.

2. ICAMPE 2015 "Talk:- Nonlinear thermal instability in a fluid saturated porous medium under modulations". Mahatma Gandhi University, Kottayam.
 3. NSRTCMS 2015 "Talk:- Weak nonlinear oscillatory convection under modulation"
 4. ICMEST-2016 "Nonlinear thermal instability under different modulations."
 5. ICAAM-2020 "NON LINEAR FLUID FLOW WITH MODULATION" FEB 21-22.
 6. "NONLINEAR THERMAL INSTABILITIES OF FLUIDS", FDP on Applications of Fluid Dynamics and Advanced Materials" from 24th to 28th August, 2020 organized by Department of Applied Science and Humanities, Bheemanna Khandre Institute of Technology, Bhalki.
 7. Guest lecture on "Basic concept of Fluid Mechanics" for MSc 4th sem students delivered 04-06-2022 at dept of Mathematics, Gulbarga university.
 8. Special guest lecture on Fluid Mechanics organised by dept of Mathematics, Gulbarga university, on 11-03-2023.
1. SH. Manjula, Palle Kiran. Thermo-rheological effect on weak nonlinear Rayleigh-Benard convection under rotation speed modulation., Book title: Hydrostatics (ISBN 978-1-80355-478-5) April 2022. Publisher: IntechOpen
 2. 2. SH. Manjula, Palle Kiran., Nonlinear thermal instability of couple-stress fluids in porous media under thermal modulation. Advances in Sustainability Science and Technology. 361-372, doi.org/10.1007/978-981-16-4321-7_31, ISBN978-981-16-4321-7, BOOK: Chemistry and Materials Science
 3. 3. Palle Kiran, Rayleigh-Bénard Convection in the Presence of Synchronous and Asynchronous Thermal Rigid Boundary Conditions. Proceedings of Fourth International Conference on Inventive Material Science Applications. 323-336, 2021, doi.org/10.1007/978-981-16-4321-7_28, ISBN:978-981-16-4321-7: BOOK: Chemistry and Material Science
 4. 4. Palle Kiran, G-jitter effects on chaotic convection in a fluid layer. 2020. ISBN 978-1-83880- 554-8, Book. Condensed matter physics. Book chapter: page. 01-23 doi:http://dx.doi.org/10.5772/intechopen.90846
 5. 5.Palle Kiran, Nonlinear thermal instability in a fluid layer under thermal modulation, High-Performance Materials and Engineered Chemistry, 76-97 (2018) ISBN 9781771885980 - CAT# N11917Apple Academic Press, Published March 13, 2018, Reference - 400 Pages - 34 Color & 112 BW Illustrations
 6. ISBN 9781771885980 - CAT# N11917, Series: Innovations in Physical Chemistry
1. Bhadauria, B.S.,P.Kiran. Study of heat and mass transport in temperature- dependent-viscous fluid under gravity modulation. Int J of Mathematical Sci with Computer Appl. 33-48 S1 (2013) IF0.3
 2. 2. Bhadauria, B.S., P.Kiran. Weakly nonlinear double diffusive convection in a temperature dependent viscosity fluid saturated porous medium under temperature modulation. Int J. Eng Trends & Tech 146-153 (2014) ISSN: 2231-5381 National conference on emerging trends in medical sciences. NCETMS,06-02-2014
 3. 3. Bhadauria, B.S.,P.Kiran. Weak nonlinear thermal convection in a fluid layer under rotation speed modulation. ISBN-(13):978-93-392-0316-0, ISBN(10):93-392-0316-x (2014) BY McGraw HillEducation8, ETES 30- 31,JAN 2014,Kolkatta
 4. 4. Bhadauria, B.S., Kiran, P.,Belhaq, M. 2014. Nonlinear thermal convection in a layer of nanofluid under g-jitter and internal heating effects. MATEC Web of Conference. 16, 09003. p01-p07. CSNDD 2014 - International Conference on Structural Nonlinear Dynamics and Diagnosis. https://doi.org/10.1051/mateconf/20141609003

No. of Chapter Published with details

Proceeding Publications

5. M. Veera Krishna, P.Kiran. R., Siva Prasad.: Hall effects on unsteady MHD free convection flow of an incompressible electrically conducting second grade fluid through a porous medium over an infinite rotating vertical plate fluctuating with heat source/sink and chemical reaction. Indian Society of Theoretical and Applied Mech 01-10 (2015)
6. Bhadauria, B.S., P.Kiran. Weakly nonlinear Bénard-Darcy convection under rotation speed modulation and internal heating effects. Indian Society of Theoretical and Applied Mech 01-19(2013)

International/National Journals from the Year 2013

1. "Bhadauria, B.S., Palle Kiran. Heat transport in an anisotropic porous medium saturated with variable viscosity liquid under temperature modulation. Transp Porous Media 100, 279-295 (2013) Springer IF1.55.Q1
2. Bhadauria, B.S., Palle Kiran. Weakly nonlinear oscillatory convection in a viscoelastic fluid saturating porous medium under temperature modulation. Int. J Heat Mass Transf. 77, 843-851 (2014) Elsevier IF 2.55 Q1
3. Bhadauria, B.S., Palle Kiran. Heat and mass transfer for oscillatory convection in a binary viscoelastic fluid layer subjected to temperature modulation at the boundaries. Int. Commun Heat Mass Transf, 58 (2014) 166–175 Elsevier IF 2.124 Q1
4. Bhadauria, B.S., Palle Kiran. Weak nonlinear oscillatory convection in a viscoelastic fluid layer under gravity modulation. Int. J Non-Linear Mech. 65, 133-140 (2014) Elsevier IF1.98. Q1
5. Bhadauria, B.S., Palle Kiran. Weak nonlinear oscillatory convection in a viscoelastic fluid saturated porous medium under gravity modulation. Transp Porous Media. 104, 451-467 (2014). Springer IF1.460 Q1
6. Bhadauria, B.S., Palle Kiran. Weak nonlinear analysis of magneto-convection under magnetic field modulation. Physica Scripta, 89, 095209 (2014) IOP IF1.296 Q1
7. Bhadauria, B.S., Palle Kiran. Nonlinear thermal Darcy convection in a nanofluid saturated porous medium under gravity modulation. Advanced Science Letters 20, 903-910 (2014) IF 1.253
8. Bhadauria, B.S., Palle Kiran. Weak nonlinear double diffusive magneto- convection in a Newtonian liquid under gravity modulation. J of Applied Fluid Mech. 8,(4) 735-746 (2014) IF 0.74 Scopus, Q3
9. Bhadauria, B.S., Palle Kiran. Effect of rotational speed modulation on heat transport in a fluid layer with temperature dependent viscosity and internal heat source. Ain Shams Eng J. 5, 1287–1297 (2014) Elsevier IF0.9, Q1
10. Bhadauria, B.S., Palle Kiran. Time periodic thermal boundary and rotation effects on heat transport in a temperature dependent viscosity liquid. Int J of Applied Math and Mech 10(9): 61-75,(2014), Scopus
11. Bhadauria, B.S., Palle Kiran. Weak Nonlinear Double-Diffusive Magnetoconvection in a Newtonian Liquid under Temperature Modulation, Int J of Engg Mathematics 2014, 01-14, 2014.
12. Bhadauria, B.S., Palle Kiran. Weak nonlinear thermal instability under vertical magnetic field, temperature modulation and heat source. Int J of Eng Rese Appli. 4 200-208(2014)
13. Bhadauria, B.S., Palle Kiran. Study of heat and mass transport in a temperature dependent viscosity fluid layer under temperature modulation. Int J of Science Eng Research, 5 1954-1963(2014)
14. Bhadauria, B.S., Palle Kiran. Study of heat transport by stationary magneto- convection in a Newtonian liquid under gravity modulation with internal heating effects. Mathematical. Science Int. Research J. 3(1), 01-07(2014)
15. Bhadauria, B.S., Palle Kiran. Weakly nonlinear convection in a variable viscosity fluid saturated porous medium under internal heating and temperature modulation. Engineering Science. Int Research J, 2(1), 01-07 (2014)
16. Bhadauria, B.S., Palle Kiran. Chaotic and oscillatory magneto-convection in a binary viscoelastic fluid under G-jitter. Int. J Heat Mass Transf. 84, 610-624 (2015) Elsevier IF2.55, Q1
17. Palle Kiran. Throughflow and g-jitter effects on binary fluid saturated porous medium. Applied Math and Mech 36,(10), 1285–1304 (2015). Springer IF1.102, SCI, Q1
18. Palle Kiran and Bhadauria. B.S.: Chaotic convection in a porous medium under temperature modulation. Transp Porous Media 107 745–763 (2015) Springer IF1.460, Q1
19. Bhadauria, B.S., Palle Kiran. Weak Nonlinear Double Diffusive Magneto-Convection in a Newtonian Liquid under Gravity Modulation. J of Applied Fluid Mech 8 (4), 735-746 (2015) IF 0.75, Scopus, Q3
20. Palle Kiran, Bhadauria, B.S.: Nonlinear throughflow effects on thermally modulated porous medium. Ain Shams Eng J. 7(1), 473-482 (2015) Elsevier IF0.9, Q1
21. Palle Kiran. Nonlinear thermal convection in a viscoelastic nanofluid saturated porous medium under gravity modulation. Ain Shams Eng J. 7, 639-651 (2015) Elsevier IF0.9 2090-4479, Q1
22. Palle Kiran. Throughflow and non-uniform heating effects on double diffusive oscillatory convection in a porous medium. Ain Shams Eng J (2016) 7, 453– 462 Elsevier IF0.9, Q1
23. P.Kiran. Weak nonlinear oscillatory convection in a non-uniform heating porous medium with throughflow. Int. J. Eng. Math. Model. 2(3) 63-78 (2015)
24. Palle Kiran., Bhadauria, B.S.: Weakly nonlinear oscillatory convection in a rotating fluid layer under temperature modulation. ASME J of Heat Transf. 138, 051702 (2016) IF 1.8, SCI Q2
25. Palle Kiran. Throughflow and gravity modulation effects on heat transport in a porous medium. J of Applied Fluid Mech. 9(3) 1105-1113, (2016) IF 0.74 Scopus, Q3

26. Palle Kiran, BS Bhadauria., V. Kumar.: Thermal convection in a nanofluid saturated porous medium with internal heating and gravity modulation. *J of nanofluid.* 5, 328-339 (2016), Scopus, Q3
27. Palle Kiran. Nonlinear throughflow and internal heating effects on vibrating porous medium. *Alexandria Eng. J* 55 (2), 757-767 (2016) IF 0.8, SCI, Q1
28. BS Bhadauria, MK Singh, A Singh, BK Singh, Palle Kiran. Stability analysis and internal heating effect on oscillatory convection in a viscoelastic fluid saturated porous medium under gravity modulation. *Int. J of Applied Mechanics and Engg.* 21 (4), 785-803 (2016) <https://doi.org/10.1515/ijame-2016-0046>, Scopus, Q3
29. Palle Kiran, Y Narasimhulu, Centrifugally driven convection in a nanofluid saturated rotating porous medium with modulation. *J of Nanofluid,* 6(3), 513-523 (2017), Scopus, Q3
30. Palle Kiran, B.S. Bhadauria, Y. Narasimhulu., Oscillatory magneto- convection under magnetic field modulation, *Alexandria Engg J,* 57, 445-453 (2017), SCI, Q1
31. Palle Kiran, Bhadauria, B.S, Y Narasimhulu.: Nonlinear throughflow effects on thermally modulated rotating porous medium. *J of Applied Nonlinear Dynamics* 6, 27-44(2017), Scopus, Q4
32. Palle Kiran, Bhadauria, B.S, Y Narasimhulu., Weakly nonlinear and nonlinear magneto-convection under thermal modulation. *J of Applied Nonlinear Dynamics,* 6(4), 487-508 (2017) Scopus, Q4
33. Palle Kiran, Bhadauria, B. S.: Throughflow and rotational effects on oscillatory convection with modulation. *Nonlinear Studies,* 23(3), 439-455 (2016), Scopus, Q4
34. Palle Kiran, K Geethanjali, Y Narasimhulu, Chaotic Convection in the Presence of Throughflow, *Int J of Pure and Applied Mathematics* 117(11), 357-367(2017)
35. Palle Kiran, Y. Narasimhulu, Weakly nonlinear oscillatory convection in an electrically conduction fluid layer under gravity modulation. *Int J Appl. Comput. Math,* 3(3), 1969–1983(2017).
36. Palle Kiran, BS Bhadauria, Weak nonlinear rotating Bénard convection with modulation using Ginzburg- Landau model, *International Journal of Science, Technology and Society* 3 2017. DOI: 10.18091/ijsts.v3i01.10959
37. Palle Kiran, Y Narasimhulu, Internal heating and thermal modulation effects on chaotic convection in a porous medium, *Journal of Nanofluids* 7 (3), 544- 555 (2018), Scopus, Q3
38. Palle Kiran, Y Narasimhulu, Weak nonlinear thermal instability in a Dielectric fluid layer under temperature modulation, *Int Journal of Advanced Research Trends in Engineering and Tech,* 5 470-476(2018)
39. Palle Kiran, S.H Manjula, YNarasimhulu, Weakly nonlinear oscillatory convection in a viscoelastic fluid saturated porous medium with through flow and temperature modulation, *Int J of Applied Mechanics and Engineering* 23(3), 635-653, 2018, UGC 2572SCOPUS
40. Palle Kiran, S.H Manjula, Y. Narasimhulu, Oscillatory convection in a rotating fluid layer under gravity modulation, *Journal of Emerging Technologies and Innovative Research,* 5(8), 227-242, (2018) UGC63975
41. S.H Manjula, Palle Kiran, Y. Narasimhulu., Heat transport in a porous medium saturated with variable viscosity under the effects of thermal modulation and internal heating, *Journal of Emerging Technologies and Innovative Research* 5(8), 59-75, (2018) UGC63975

Work With CBIT Affiliation

42. Palle Kiran., 2020. Concentration modulation effect on weakly nonlinear thermal Instability in a rotating porous medium. *J of Applied fluid Mechanics.* 13(5), 1663-1674, 2020. SCIE Scopus, Q3, DOI: 10.36884/jafm.13.05.30753
43. SH Manjula, Palle Kiran, R. Reddy, BS. Bhadauria., The complex ginzburg landau model for an oscillatory convection in a rotating fluid layer., *Int J of Applied Mathematics and Mechanics,* 25, 75-91 (2020) DOI: 10.2478/ijame-2020-0006. Scopus, Q3
44. Palle Kiran, et al., Nonlinear throughflow effects on vertically oscillating rotating porous medium, *Advanced Science, Engineering and Medicine* 12(6):781-791 2020
45. Palle Kiran and S. H. Manjula, Weakly nonlinear double-diffusive oscillatory magneto-convection under gravity modulation. *Sensor Lett.* 18, 725–738 (2020). doi:10.1166/sl.2020.4281
46. Palle Kiran, SH. Manjula2, G.Narasimlu, R. Roslan3. The effect of modulation on heat transport by a weakly nonlinear thermal instability in the presence of applied magnetic field and internal heating. *Int J of Applied Mathematics and Mechanics,* 25(4), 96-115 (2020) Scopus, Q3
47. Palle Kiran, BS. Bhadauria and R. Roslan. The effect of throughflow on weakly nonlinear convection in a viscoelastic saturated porous medium, *J of nanofluid,* 9(1), 36-46, 2020. Scopus/Web of science, Q3 doi:10.1166/jon.2020.1724
48. Palle Kiran, S.H. Manjula, 2020. Weakly nonlinear mass transfer in an internally soluted and modulated porous layer. *Adv. Sci. Eng. Med.* 12, 622–631 (2020) doi:10.1166/ asem.2020.2566 Scopus
49. SH. Manjula, Palle Kiran & BS. Bhadauria. Throughflow and G-jitter effects on oscillatory convection in a rotating porous medium. *Adv. Sci. Eng. Med.* 12, 781-791, (2020). doi:10.1166/ asem.2020.2580. Scopus
50. Palle Kiran, SH Manjula2 and R. Roslan3. The effect of gravity modulation on double diffusive convection in the presence of applied magnetic field and internal heat source. *Adv. Sci. Eng. Med.* Vol. 12, 792-805, 2020. doi:10.1166/ asem.2020.2576

51. Palle Kiran, S.H. Manjula., P. Suresh & P.Raj Reddy. The Time Periodic Solutal Effect on Oscillatory Convection in an Electrically Conducting Fluid Layer. 2261(1), 030004 (2020); <https://doi.org/10.1063/5.0016964>, SCOPUS, Q3
52. SH. Manjula, Palle Kiran, 2020. Throughflow and gravity modulation effects on double diffusive oscillatory convection in a viscoelastic fluid saturated porous medium. Adv. Sci. Eng. Med. 12, 612–621 (2020)doi:10.1166/ asem.2020.2565 Scopus
53. S.H. Manjula., Palle Kiran., S. Narayanamoorthy. The Effect of Gravity Driven Thermal Instability In The Presence of Applied Magnetic Field and Internal Heating. AIP Proceedings 2261 (1), 030042 (2020); <https://doi.org/10.1063/5.0016996>, SCOPUS,
54. Palle Kiran. (2019): Vibrational effect on internal heated porous medium in the presence of chaos. Int J of Petrochemical Engg, 04, 13-23.doi.10.15406/ ipcse.2019.04.00098
55. Palle Kiran, Gravity modulation effect on weakly nonlinear thermal convection in a fluid layer bounded by rigid boundaries. Int J nonlinear Sci & Numerical simulation 2022, <https://doi.org/10.1515/ijnsns-2021-0054>. IF 2.3 SCI, Q2
56. Palle Kiran, SH Manjula, R. Roslan. Weak nonlinear analysis of nanofluid convection with g-jitter using Ginzburg Landau model. Open Physics, 20, 1283–1294 2022. IF 1.36 SCI/WOS, Q3 <https://doi.org/10.1515/phys-2022-0217>,
57. Palle Kiran, SH Manjula, Time-periodic thermal boundary effects on porous media saturated with nanofluids, CGLE model for oscillatory mode Advances in Materials Science 2022 WOS/ESCI
58. SN, Gaikwad., Bhushan, P. Palle Kiran. (2022). Effects of Throughflow and Gravity Modulation on Thermal Convection in a Couple Stress Fluid Saturated Porous Layer. CFD Letters, 14(7), 1–17. <https://doi.org/10.37934/cfdl.14.7.117>. (2022) Scopus,Q3
59. Palle Kiran., Gravitational modulation effect on double-diffusive oscillatory convection in a viscoelastic fluid layer. J of Nanofluids. 20, 01-24, 2022. WOS, Q3
60. Palle Kiran and S. H. Manjula, Nanofluid gravity-driven oscillatory mode of convection in a porous medium, J of Applied Mechanics and Technical Physics, Accept March 2023. Scopus/WOS
61. SH Manjula, G Kavitha, Palle Kiran, Ginzburg Landau Model for Nanofluid Convection in the Presence of Time Periodic Plate Modulation CFD Letters 15 (4), 64-79 (2023) Scopus, Q3
62. Palle Kiran and S. H. Manjula, Internal Heat Modulation on Darcy Convection in a Porous Media Saturated by Nanofluid, J of Nanofluids, 12, pp. 1–10, 2023, WOS, Q3
63. SH Manjula, Palle Kiran Effect of Gravitation Modulation on Viscoelastic Nonlinear Ferro-Convection, BULETINUL INSTITUTULUI POLITEHNIC DIN IAȘI. Secția Matematica. Mecanică Teoretică Fizică 68(2), 7-24, 2022.
64. S. H. Manjula, Palle Kiran, and S. N. Gaikwad. Study of Heat and Mass Transfer in a Rotating Nanofluid Layer Under Gravity Modulation. J of Nanofluids, 12, pp. 1–11, 2023. WOS, Q3

INSTITUTE OF TECHNOLOGY

స్వయం తేజస్విన్ భవ

1979