**ANNAMACHARYA UNIVERSITY FACULTY DETAILS FOR WEBSITE**

**About Profile**

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NAME: **Dr. P. Chandra Reddy**

DATE OF BIRTH: 02.05.1978

 DESIGNATION: Associate professor

 DEPARTMENT: Humanities and Sciences (Mathematics)

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DATE OF JOINING: 12.08.2013

 EMPLOYEE ID: AITS991018

## Academic Profile

| **Qualification** | **Name of the Board/University** | **YEAR** |
| --- | --- | --- |
| **Ph.D** | **JNTUA, Anantapur** | **2017** |
| **M.Sc** | **S.V. University** | **2001** |
| **B.Sc** | **S.V. University** | **1998** |

## Research Details

1. Areas of Specialization: Fluid Dynamics,

 Heat and Mass transfer

1. List of Publications: 56
2. Awards Received : -
3. Research Guidance:
4. No. of PhD Guided: 01
5. No. of M.Tech Guided:
6. No. of B.Tech Guided:
7. Details of Professional Membership:
* Member of National Advisory Editorial Board, BPAS Publications
* Life member of Andhra Pradesh and Telangana Society of Mathematical Sciences (APTSMS)
* Chaired sessions in some national conferences.
* Editorial Board Member of i-manager’s Journal on Mathematics (JMAT).
1. Subjects Taught:
* Algebra and Calculus (Matrices, Partial Differentiation, Multiple integrals, Special functions)
* Differential Equations and Vector Calculus (Differential Equations, Applications of Integration, Vector Differentiation, Vector integration)
* Transform Techniques, Numerical methods and Complex variables (Laplace Transforms, Fourier Series, Fourier Transforms, Numerical Methods and Complex Analysis)
* Probability & Statistics: (Probability, Random Variables, Probability Distributions, Sampling Distributions, Testing of Hypothesis)
* Computational Methods: (Numerical techniques for solving Ordinary and Partial differential equations, Basics of Matlab)
* Business Statistics: (Scope and applications of Statistics, Mathematical statistics, Index numbers, Time series)
* Operations research: (Scope and applications of Operations research, Optimization, Transportation problems, Assignment problems, PERT & CPM.
* General Aptitude: (Aptitude and resoning)
* Mathematical Modelling: (Mathematical Modelling through Ordinary differential equations of first and second order, simultaneous D.E.s, Difference equations)

## Publication Details

1. **P. Chandra Reddy**, M.C. Raju, G.S.S. Raju, Thermal and solutal buoyancy effect on MHD boundary layer flow of a visco-elastic fluid past a porous plate with varying suction and heat source in the presence of thermal diffusion, Journal of Applied & Computational Mathematics. 4(5) (2015) 1-7. doi:10.4172/2168-9679.1000249
2. **P. Chandra Reddy**, M.C. Raju, G.S.S. Raju, Magnetohydrodynamic convective double diffusive laminar boundary layer flow past an accelerated vertical plate, International Journal of Engineering Research in Africa. 20 (2016) 80-92.

doi:10.4028/www.scientific.net/JERA.20.80

1. **P. Chandra Reddy**, M.C. Raju, G.S.S. Raju, Soret and Dufour effects on MHD free convection flow of Rivlin-Ericksen fluid past a semi infinite vertical plate, Advances and Applications in Fluid Mechanics. 19 (2016) 401-414. doi:10.17654/FM019020401.
2. **P. Chandra Reddy**, M.C. Raju, G.S.S. Raju, S.V.K. Varma, Free convective magneto-nanofluid flow past a moving vertical plate in the presence of radiation and thermal diffusion, Frontiers in Heat and Mass Transfer, Int. Journal. 7, 28 (2016) 1-7.
3. **P. Chandra Reddy**, M.C. Raju, G.S.S. Raju, Free convective heat and mass transfer flow of heat generating nano fluid past a vertical moving porous plate in conducting field, Special Topics and Reviews in Porous Media. 7(2) (2016) 161-180. Begell House publications.
4. **P. Chandra Reddy**, M.C. Raju, G.S.S. Raju, C. Madhava Reddy, Diffusion thermo and thermal diffusion effects on MHD free convection flow of Rivlin-Ericksen fluid past a semi infinite vertical plate, Bulletin of Pure and Applied Sciences. 36E(2) (2017) 266-284.
5. N. Ananda Reddy, **P. Chandra Reddy**, M.C. Raju, S.V.K.Varma, Radiation and Dufour effects on laminar flow of a rotating fluid past a porous plate in conducting field, Frontiers in Heat and Mass Transfer, Int. Journal, 10 (4) (2018) 1-7.
6. L. Rama Mohan Reddy, M.C. Raju, **P. Chandra Reddy**, G.S.S. Raju, Thermal diffusion and Joule-heating effects on magnetohydrodynamic, free-convective, heat-absorbing/ generating, viscous-dissipative Newtonian fluid with variable temperature and concentration, International Journal of Fluid Mechanics Research, 45 (6) (2018) 553–567.
7. S. Harinath Reddy, M.C. Raju, **P. Chandra Reddy**, Joule Heating and Radiation Absorption Effects on MHD Convective and Chemically Reactive Flow past a Porous Plate, Bulletin of Pure and Applied Sciences. 37E (1) (2018) 117-136.
8. K. Sidda Reddy, **P. Chandra Reddy**, G.S.S. Raju, Thermal diffusion and Joule heating effects on MHD radiating fluid embedded in porous medium, International Journal for Research in Engineering Application & Management (IJREAM), 4(4) (2018) 206-212.
9. N. Veera Mohan Reddy, M. Uma Maheswar, **P. Chandra Reddy**, Magneto-convective and radiation absorption fluid flow with variable temperature and concentration in the presence of thermal diffusion, International Journal for Research in Engineering Application & Management (IJREAM), 4(7) (2018) 608-616.
10. **P. Chandra Reddy**, M.C. Raju, S. Harinath Reddy, G.S.S. Raju, Casson fluid flow over a vertical porous plate under the existence of cross diffusion effects in conducting field, International Journal of Advanced Scientific Research and Management, 3 (11) (2018) 380-387.
11. S. Harinath Reddy, **P. Chandra Reddy**, M.C. Raju, E. Keshava Reddy, Joule heating influence on MHD casson fluid over a vertical porous plate in the presence of thermal diffusion and chemical reaction, International Journal of Research in Advent Technology, 6(11) (2018) 2980-2988.
12. **P. Chandra Reddy**, M.C. Raju, G.S.S. Raju, MHD heat generating/absorbing and radiating fluid past a porous plate, Journal of Applied Physical Science International, 10(4) (2018) 186-198.
13. G. Sivaiah, K. Jayarami Reddy, **P. Chandra Reddy**, M.C. Raju, Numerical study of MHD boundary layer flow of a viscoelastic and dissipative fluid past a porous plate in the presence of thermal radiation,International Journal of Fluid Mechanics Research, 46(1) (2019) 27–38.
14. **P. Chandra Reddy**, M.C. Raju, G.S.S. Raju, MHD natural convective heat generating/ absorbing and radiating fluid past a vertical plate embedded in porous medium–an exact solution, Journal of the Serbian Society for Computational Mechanics, 12(2) (2018) 106-127.
15. Ram Prakash Sharma, M.C. Raju, O.D. Makinde, P.R. Krishna Reddy, **P. Chandra Reddy,** Buoyancy effects on unsteady MHD chemically reacting and rotatingfluid flow past a plate in a porous medium, Defect and Diffusion Forum, 392, 1-9.
16. **P. Chandra Reddy**, K. Venkateswara Raju, M. Umamaheswar, M.C. Raju, Buoyancy effects on chemically reactive magneto-nanofluid past a moving vertical plate, Bulletin of Pure and Applied Sciences. 38E (1) (2019) 193-207.
17. M. Umamaheswar, **P. Chandra Reddy**, M. Chengal Raju, Effects of Chemical Reaction and Radiation on MHD Convective Casson Fluid Flow, International Journal of Engineering Research, 8(3) (2019) 70-74.
18. A.J. Chamkha, M. Umamaheswar, **P. Chandra Reddy**, & M.C. Raju,Mathematical analysis of non-Newtonian fluid flow past an inclined plate, Special Topics & Reviews in Porous Media — An International Journal, 10(5) (2019) 429–446.
19. A. B. MadhuMohanaRaju, G. SankaraSekharRaju, **P. Chandra Reddy**, An Unsteady MHD Mixed Convection Flow Pattern of Casson Fluid through Past Vertical Porous Plate with Radiation and Chemical Reaction, International Journal of Scientific Research in Computer Science, Engineering and Information Technology, 4(9), (2019) 222-228. ISSN : 2456-3307.
20. P. Roja, T. Sankar Reddy, M. Parvathi, **P. Chandra Reddy**, Thermal Radiation and Thermophoresis Effects on Steady MHD Free Convection Flow of a Micropolar Fluid through a Porous Medium with Variable Heat and Mass Flux Boundary Conditions, International Journal of Engineering Research, 9(1) (2020) 05-09.
21. **P. Chandra Reddy**, S. Harinath Reddy, G. Sivaiah, V. Ravi Kumar, M.C. Raju, Three dimensional laminar flow of magnetite water based nanofluids under heat generation and couple stress effects, JP Journal of Heat and Mass Transfer, 19(1) (2020) 19-29.
22. C. Srinivasulu, **P. Chandra Reddy**, M. Umamaheswar, Thermophoresis effect on MHD flow of a micropolar fluid under variable heat flux, Journal of Xidian University, 14(4) (2020) 1882-1889.
23. T. Sankar Reddy, P. Roja, **P. Chandra Reddy** and M. Parvathi, Thermal radiation and viscous dissipation effects on steady MHD heat and mass transfer flow of a micropolar fluid over an inclined isothermal permeable surface in the presence of thermophoresis, Journal of Xidian University, 14(4) (2020) 3951-3967.
24. L. Rama Mohan Reddy, P. Rama Krishna Reddy, **P. Chandra Reddy**, M.C. Raju, Uniform boundary layer flow of Casson fluid past a vertical plate through porous medium in conducing fluid, Journal of Xidian University, 14(5) (2020) 1201-1212.
25. **P. Chandra Reddy**, P.V. Sanjeeva Kumar, L. Rama Mohan Reddy, M.C. Raju, Heat and Mass Characteristics of Magneto-Newtonian Fluid Through Upright Porous Plate, Lecture Notes in Electrical Engineering, 643, (2020). https://doi.org/10.1007/978-981-15-3125-5\_39.
26. **P. Chandra Reddy,** N. Veera Mohan Reddy, C. Srinivasulu, Flow characteristics of unsteady MHD Newtonian fluid past a rotating vertical porous plate, Bulletin of Pure and Applied Sciences, Sect. E Math. Stat. 39E(1), 122–136 (2020) DOI: 10.5958/2320-3226.2020.00012.0 e-ISSN:2320-3226, Print ISSN:0970-6577.
27. **P. Chandra Reddy**, M. Umamaheswar, S. Harinath Reddy, M.C. Raju, Analytical study of buoyancy effects on MHD visco-elastic fluid past an inclined plate, AIP Conference Proceedings 2246, 020072 (2020) 020072-1-020072-7; https://doi.org/10.1063/5.0014572. 28 July 2020. ISSN:1551-7616.
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29. M. Umamaheswar, S. Harinath Reddy, **P. Chandra Reddy**, V. Ravi Kumar, and M. C. Raju, Analytical study on MHD convective non- Newtonian fluid flow under the influence of diffusion-thermo and heat source effects, AIP Conference Proceedings 2246, 020074 (2020) 020074-1-020074-8; https://doi.org/10.1063/5.0014585, 28 July 2020. ISSN:1551-7616.
30. S. Harinath Reddy, M. Umamaheswar, **P. Chandra Reddy**, M. C. Raju, and E. Keshava Reddy, MHD double diffusive convective flow of heat generating fluid in the presence of Soret Effect, AIP Conference Proceedings 2246, 020073 (2020) 020073-1-020073-7; https://doi.org/10.1063/5.0014623, 28 July 2020. ISSN:1551-7616.
31. V. Ravi kumar, M. Umamaheswar, **P. Chandra Reddy**, K. Janardhan, M. C. Raju, and G. S. S. Raju, Unsteady MHD free convective flow of a radiating fluid past an inclined permeable plate in the presence of heat source, AIP Conference Proceedings 2246, 020086 (2020) 020086-1-020086-8; https://doi.org/10.1063/5.0014630, 28 July 2020. ISSN:1551-7616.
32. P. Rama Krishna Reddy, Lingari Rama Mohan Reddy, **P. Chandra Reddy**, and M. C. Raju, Maragoni convection impact on magnetonano fluid in porous medium, AIP Conference Proceedings 2246, 020061 (2020) 020061-1-020061-8; https://doi.org/10.1063/5.0014611, 28 July 2020. ISSN:1551-7616.
33. A. B. Madhumohana Raju, **P. Chandra Reddy**, B. Mallikarjuna and C. S. K. Raju, Radiation absorption and Soret effects on MHD Conducting fluid flow past an exponentially Accelerated vertical plate, South East Asian J. of Mathematics and Mathematical Sciences, 16 (3) (2020), 283-294.ISSN (Online): 2582-0850, ISSN (Print): 0972-7752.
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35. **Poli Chandra Reddy**, Mummadisetty Umamaheswar, Singamala Harinath Reddy, Malaraju Chengal Raju, Analysis of MHD nanofluid in a rotating system under the existence of heat absorption, Annals of the Faculty of Engineering Hunedoara-International Journal of Engineering, 4 (2021) (November) 111-118.
36. **Poli Chandra Reddy**, Mummadisetty Umamaheswar, Singamala Harinath Reddy, A. B. Madhumohana Raju, Malaraju Chengal Raju, Numerical study on the parabolic flow of MHD fluid past a vertical plate in a porous Medium, Heat Transfer, 51(4) (2022) 3418-3430.
37. Parvathi Meruva**, Poli Chandra Reddy,** Parakapali Roja, Appikatla Leela Ratnam, Characteristics of MHD three dimensional flow of nanofluid over a permeable stretching porous sheet, Heat Transfer, 51(4) (2022) 3586-3599.
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40. S. Harinath Reddy, M. Umamaheswar, **P. Chandra Reddy**, Kolla Kumaraswamy Naidu, Dondu Harish Babu, M. C. Raju, and E. Keshava Reddy, MHD flow pattern in a parabolic mode based on the angle of inclination under cross diffusion. Heat Transfer. August 2022;1-17. ISSN: **2688-4534**. doi:10.1002/htj.22661.
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42. **P. Chandra Reddy**, B. Hari Babu, K. Sreenivasulu, Thermophoresis impact on a micropolar fluid under changeable heat flux in conducting field, Frontiers in Heat and Mass Transfer (FHMT), 19, 27 (August 2022). http://dx.doi.org/10.5098/hmt.19.27.
43. L. Rama Mohan Reddy, P. Veera Sanjeeva Kumar, K. Mohana Babu, **P. Chandra Reddy**, Study on MHD Free Convection flow of a Casson Fluid Flow Past a Vertical Porous PlateWith Uniform Boundaries, GANITA, 72(1), 319-326, Nov 2022.
44. Mummadisetty Umamaheswar, **Poli Chandra Reddy,** Singamala Harinath Reddy, B. Hari Babu, Parabolic form of Casson fluid flow based on angle of inclination in conducting field, i-manager’s Journal on Mathematics, 12(1) (June 2023) 21-28.
45. M. Parvathi, J.S. Sukanya, B. Hari Babu, P. Roja, **P. Chandra Reddy**, M. Umamaheswar, Flow pattern of MHD Casson nanofluid past a porous stretching sheet – a numerical approach, Eur. Chem. Bull. 2023, 12 (6), 715 – 727. **DOI: 10.31838/ecb/2023.12.6.66.**
46. P. Roja, S. Venkateswarlu, Mani Ramanuja, T. Sankar Reddy, M. Parvathi, M. Umamaheswar, **P. Chandra Reddy**, Study on MHD flow of micropolar fluid over a stretching surface under the impacts of heat source and chemical reaction, Eur. Chem. Bull. 2023, 12 (6), 934 – 949. **DOI: 10.31838/ecb/2023.12.6.85.**
47. C. Srinivasulu**, P. Chandra Reddy**, M. Umamaheswar, S. Harinath Reddy, Exact solution for an unsteady flow of radiative nanofluid under the existence of heat source in conducting field, BioGecko, 12(3) (2023) 5998-6004. DOI:  [http://biogecko.co.nz/.2023.v12.i03.pp5998-6004](http://www.biogecko.co.nz/admin/uploads/MANUSCRIPT%20-%20CS%20FINAL.pdf).
48. M. Parvathi, P. Roja, **P. Chandra Reddy**, M. Umamaheswar, Numerical Based Study on the Flow Pattern of Casson Nano fluid under Thermo Diffusion in Conducting Field, BioGecko, 12(3) (2023) 6005-6011. DOI: [http://biogecko.co.nz/.2023.v12.i03.pp6005-6011](http://www.biogecko.co.nz/admin/uploads/MANUSCRIPT%20-%20MP-WOS.pdf).
49. M. Umamaheswar, S. Harinath Reddy, K. Kumaraswamy Naidu, D. Harish Babu, **P. Chandra Reddy,** MHD Double Diffusive Radiative Jeffrey Fluid near Stagnation Point Flow towards a Stretching Sheet, BioGecko, 12(3) (2023) 6012-6020. DOI : [http://biogecko.co.nz/.2023.v12.i03.pp6012-6020](http://www.biogecko.co.nz/admin/uploads/MANUSCRIPT%20-%20MUM.pdf).
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51. S. Venkata Ramireddy, K. Janardhan, M. Umamaheswar, **P. Chandra Reddy**, V. Ravi Kumar, Flow Characteristics of MHD Radiative Heat Absorbing/Generating Nanofluid with Variable Temperature, BioGecko, 12(3) (2023) 6039-6044. DOI : [http://biogecko.co.nz/.2023.v12.i03.pp6039-6044](http://www.biogecko.co.nz/admin/uploads/MODIFIED%20MANUSCRIPT%20-%20KJ.pdf).
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54. Jyothi, K., Venkateswarlu, B., **Poli Chandra Reddy**, Raghunath Kodi, Damodara Reddy Annapureddy, Neural network-driven analysis of MHD boundary layer flow and heat transfer in Sisko nanofluids. Multiscale and Multidiscip. Model. Exp. and Des. 8, 291 (2025) 1-15. <https://doi.org/10.1007/s41939-025-00877-1>.