

# Curriculum Vitae

## Prof. Malla Reddy Perati, Ph.D.

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## Academic Positions & Academic Credits

- June 2021 – . . . . . **Controller of Examinations**, Kakatiya University.
- November 2019 – . . . . . **Member, Executive Council**, Kakatiya University.
- September 2017– . . . . . **Principal**, Kakatiya University College of Engineering and Technology.
- May 2016 - Jan 2017 **Principal**, Kakatiya University College of Engineering and Technology.
- Sep 2015 - June 2017 **Additional Controller of Examinations**, Kakatiya University.
- May 2013 - Sep 2015 **Head**, Department of Mathematics, Kakatiya University.
- Nov 2012 - Sep 2013 **Coordinator**, Internal Quality Assurance Cell (IQAC), University Arts & Science College, Kakatiya University.
- April 2010 - April 2012 **Chairman**, Board of Studies (BoS) in Mathematics, Kakatiya University.
- Fellow**, Telangana Academy of Sciences (TAS).
- Invited Speaker** for Mathematical Sciences Section of 103rd, 105th & 106th Indian Science Congress.

## Academic Profile

### Postdoctoral Research

- Sep 2003-Jan 2007 **University**: Graduate Institute of Communication Engineering & Department of Electrical Engineering, National Taiwan University, Taiwan.
- Adviser**: Prof. Jingshown Wu.
- Research Area**: Network Traffic Modeling and Performance Analysis of Internet Router.

### Ph.D. Programme

- 1994-1998 **Ph.D** awarded from the Department of Mathematics, Osmania University, Hyderabad, India.
- Title of Thesis**: Dispersion Studies of Waves in Poroelastic Plates and Cylinders.

## Academic Profile (continued)

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📌 **Adviser:** Prof. M. Tajuddin .

### M.Phil Programme

- 1992-1994 📌 **M.Phil** awarded from the Department of Mathematics, Osmania University, Hyderabad, India.
- 📌 **Dissertation Title:** Calculus of Variational Techniques in Elastostatic Problems.
- 📌 **Adviser:** Prof. Kishan Rao.
- 1989-1991 📌 **M.Sc (Mathematics);** First division with distinction, Kakatiya University, India.
- 1986-1989 📌 **B.Sc. (Mathematics, Physics, Chemistry) ;** First division with distinction, Kakatiya University, India.

## Fellowships

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- Sep 2002- Jan 2007 📌 **Post-Doctoral Fellowship** received from National Science Council, through Graduate Institute of Communication Engineering, National Taiwan University, Taipei.
- Jan 1996 📌 **Senior Research Fellowship** awarded by Council of Scientific and Industrial Research (CSIR) through UGC-CSIR joint exam NET (National Eligibility Test).
- Jan 1995 📌 **Junior Research Fellowship** awarded by Council of Scientific and Industrial Research through UGC-CSIR joint exam NET (National Eligibility Test).

## Industrial Experience

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- Sep 2001-Sep 2002 📌 **Team Member in Software Quality Assurance**, Conseco India Pvt. Ltd, Hyderabad, India (A wholly owned subsidiary of Conseco Inc. USA).
- Sep 2000-Sep 2001 📌 **Insurance Programmer & Analyst**, Conseco India Pvt. Ltd, Hyderabad, India (A wholly owned subsidiary of Conseco Inc. USA).

## Research Credits

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### Major Research Projects (MRPs)

- Apr 2009-Mar 2012 📌 Propagation of waves in cylindrical compact trabecular bone with marrow, funded by University Grants Commission (UGC), Government of India, Grant No. F.No. 34-141/2008 (S.R), (Completed).
- Mar 2010 – Apr 2012 📌 Performance study of internet router employing partial buffer sharing mechanism under Markovian modeled self-similar variable packet length input traffic, funded by Department of Science and Technology (DST), Government of India, Grant No. SR/S4/MS: 530/o8, (Completed).

## Research Credits (continued)

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- Apr 2019-till date    **■** Performance analysis of internet router with self-similar input traffic-transient (time dependent) queueing system with Markovian modeled input process, funded by Council of Scientific and Industrial Research (CSIR),(On going).

### Mentor for Postdoctoral Research Program

- Apr 2012-Apr 2015    **■** **D.S.Kothari Postdoctoral Fellowship Program, UGC, Dr.A. Sri-sailam.**
- Nov 2015- Dec 2020    **■** **Women Postdoctoral Fellowship Program, UGC, Dr.Rajitha Gurijala.**

## Ph.D / M.Tech Programme Guided

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- November 2011    **■** **L.P. Raj Kumar**, Ph.D. Degree awarded from the Department of Mathematics, Kakatiya University.
- **Title :** Performance study of Internet router using matrix queueing theory.
- February 2012    **■** **D. Mallikarjuna Reddy**, Ph.D. Degree awarded from the Department of Statistics, Kakatiya University.
- **Title :** Performance analysis of Internet router under self-similar variable packet length input traffic - Markovian approach.
- April 2014    **■** **B. Sandhya Rani**, Ph.D. Degree awarded from the Department of Mathematics, Kakatiya University.
- **Title :** Dispersion studies of wave propagation in poroelastic cylinder and polygonal cross sectional bars with relevance to bone mechanics.
- August 2014    **■** **Rajitha Gurijala**, Ph.D. Degree awarded from the Department of Mathematics, Kakatiya University.
- **Title :** Study of vibrations in poroelastic solids using the variants of Biot's theory.
- January 2015    **■** **D. Rajaiah**, Ph.D. Degree awarded from the Department of Mathematics, Kakatiya University.
- **Title :** Mathematical modelling and performance analysis of Internet router with differentiated services under self-similar input process.
- December 2016    **■** **G. Ravi Kumar**, Ph.D. Degree awarded from the Department of Mathematics, Kakatiya University.
- **Title :** Performance analysis of Internet router under asynchronous self-similar traffic input-Multi server priority based queueing system with Markovian input process and various service time distributions.
- February 2017    **■** **Manjula Ramagiri**, Ph.D. Degree awarded from the Department of Mathematics, Kakatiya University.
- **Title :** Study of vibrations in prothermoelastic solids in the presence of static stresses.
- May 2017    **■** **D. Ranadheer**, Ph.D. Degree awarded from the Department of Mathematics, Kakatiya University.
- **Title :** Performance evaluation of Internet router-steady state probability distribution vector of block circulant Markov chains.

## Ph.D / M.Tech Programme Guided (continued)

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- June 2017    **R. Ramesh**, Ph.D. Degree awarded from the Department of Mathematics, Kakatiya University.  
**Title** : Internet traffic modeling using circulant Markov modulated Poisson process-steady state probability vector of circulant matrices.
- October 2017    **K. Sampath Kumar**, Ph.D. Degree awarded from the Department of Computer Science & Engineering, JNTU, Hyderabad.  
**Title** : Internet traffic modeling to dimension router.
- April 2018    **Ch. Balu**, Ph.D. Degree awarded from the Department of Mathematics, Kakatiya University.  
**Title** : Investigation of wave propagations in poroelastic or magneto poroelastic cylinders.
- November 2021    **Ala Sindhuja**, Ph.D. Degree awarded from the Department of Mathematics, Kakatiya University.  
**Title** : Study of wave phenomena for various poroelastic solids using analytical methods and Finite Element Methods (FEM).
- July 2011    **K. Raghavendra**, M.Tech Degree awarded from National Institute of Technology Surathkal (NITK).  
**Title** : Self-similar behavior of highway road traffic and occupancy analysis at toll plazas.

## Editorial Credits

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- 2011    **Guest Editor**, Special Issue “Continuum Mechanics and Earthquake Seismology”, International Journal of Engineering, Science and Technology (IJEST), Vol.3(2), Jointly with Prof. Amares Chatopadhyay, Indian School of Mines, Dhanbad.
- 2015    **Editor**, Journal of Physics (Conference Series, 662, 2015, Institute of Physics, UK ), International Conference on Vibration Problems (ICOVP-2015), Feb 18-20, 2015, Jointly organized by Department of Mathematics and Department of Mechanical Engineering, Kakatiya University, and Von-Karman Society, West Bengal.

## Reviewer for the Journals

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- 1 International Journal on Geomathematics, Springer Nature.
- 2 Reviews of American Mathematical Society (AMS).
- 3 Journal of Sandwich Structures and Materials.
- 4 Acta Mechanica.
- 5 Journal of Vibration and Control (JVC).
- 6 Journal of Porous Media.
- 7 Special Topics and Reviews in Porous Media, an International Journal.

- 8 Geophysical Journal International.
- 9 International Journal of Communication Systems.

## Research Collaborations

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- 1 Dr. Shou-Kuo Shao, Network Operation Supporting Technology Lab, Chunghwa Telecommunication Laboratories, Chunghwa Telecom Co. Ltd., Yang-Mei, Taoyuan, Taiwan-326. E-mail: skshao@cht.com.tw
- 2 Dr. Hari Kishan Reddy Koppula , Managing Director, VR Techniche Pvt Ltd, Noida, New Delhi, India.
- 3 Visited School of Medicine, New York University, USA and worked with Dr. Ravinder Reddy Regatte, in the domain of Bone Mechanics, during May-June, 2012.
- 4 Visited Indian Institute of Science (IISc), Bangalore under the scheme of Indo French Centre for Applied Mathematics from 10 -01-2014 to 31-01-2014.

## Conferences Organized

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| March 13-15, 2010    | ■ | <b>WMVC-2010:</b> Organizing secretary, 5th National Conference on Applicable Mathematics in Wave Mechanics and Vibrations , held at Kakatiya University, India. |
| February 18-20, 2015 | ■ | <b>ICOVP-2015:</b> Director, International Conference on Vibration Problems, held at Kakatiya University, India.   |
| December 22-24, 2018 | ■ | <b>TSSC-2018:</b> Sectional Secretary of Mathematical Sciences, Telangana State Science Congress, held at National Institute of Technology, Warangal, India.     |

## Conferences Attended, Presented Papers, and Invited Talks

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- 1 Presented paper in the Third International Conference on Vibration Problems held at University of North Bengal, India, Nov. 1996, (Peer reviewed).
- 2 Presented paper in the National Seminar on Recent Trends and Advances of Mathematics and Statistics in Engineering and Technology, held at Indian School of Mines, Dhanbad, India, Nov. 1997, (Peer reviewed).
- 3 Attended 44th Indian Society of Theoretical and Applied Mechanics (ISTAM) conference held at National Institute of Technology (NIT), Warangal, India, Dec. 1999.
- 4 Presented paper in the Third SIAM (Society for Industrial and Applied Mathematics) on Materials Science, held in Philadelphia, USA, May 2000, (Peer reviewed).
- 5 Attended International Conference on Non-linear Problems, held at Academia Sinica, Taipei, Taiwan, Dec.2005.
- 6 Presented paper in the IEEE High Performance Switching and Routing (HPSR) conference held in New York, USA, May 30-June1, 2007, (Peer reviewed).

- 7 Participated in Indian Society of Theoretical and Applied Mechanics (ISTAM) conference held at National Institute of Technology (NIT), Hamirpur, India, Dec.2010.
- 8 Delivered invited talk “Matrix Geometric Solutions”, in Short Term Training Program on Mathematical Modeling and Numerical Techniques, Department of Mathematics, National Institute of Technology, Warangal, 17-21 January, 2011.
- 9 Delivered invited talk “General Measure Theory”, in Training Program and Advanced Analysis for PG Faculty, held at Department of Mathematics, Kakatiya University, Warangal, 8-11 April, 2011.
- 10 Presented paper in the 4th International Conference on Porous Media (INTERPORE -2012), Purdue University, USA, 14-16 May, 2012, (Peer reviewed).
- 11 Presented paper in the IEEE International Conference on Networks (ICON-2012), Singapore, 12-14 December, 2012, (Peer reviewed).
- 12 Chaired a session for “18th IEEE International Conference on Networks”, Singapore, 12-14 December, 2012.
- 13 Delivered invited talk “Circulant Markov Modulated Poisson Process”, in Workshop on Mathematical Modeling in Engineering, Department of Mathematics, National Institute of Technology, Warangal, India, 4-6 December, 2013.
- 14 Delivered invited talk “Plane Stress Problem in Poroelasticity”, in STTP on Contemporary Approaches of Applied Mathematics in Science and Engineering, National Institute of Technology, Warangal, 11-15 May, 2015 India.
- 15 Chaired a session for “International Conference on Computational Heat and Mass Transfer”, Department of Mathematics, National Institute of Technology, Warangal, November 30 -December 2, 2015.
- 16 Delivered invited talk “Steady State Probability Vector of Positive Definite Regularized Linear Systems of Circulant Stochastic Matrices”, on 14-12-2015, NIT Warangal.
- 17 Delivered invited talk “Study of Vibrations in Poroelastic Solid Bars with Polygonal Cross Section using Fourier Collocation Method” on 23-12-2015 in 6th National Conference on Wave Mechanics and Vibrations Conference (WMVC), ISM Dhanbad.
- 18 Delivered invited talk “Biot’s Extension Theory of Porous Materials” in the 103rd Indian Science Congress held at Mysore University, Jan 3-5, 2016.
- 19 Resource Person for Refresher Course held at Academic Staff College, Osmania University, Hyderabad, 15th February, 2017.
- 20 Delivered invited talk “Investigation of Vibrations in Poroelastic Solid Bars with Polygonal Cross Section using Fourier Collocation Method” in 20th International Conference of International Academy of Physical Sciences on Recent Advances in Physical Sciences and Future Challenges held at Faculty of Science (Department of Mathematics, Physics and Chemistry), Osmania University, Hyderabad, 14-16 July, 2017.
- 21 Delivered invited talk “Internet Router Modeling–Markov Process and Matrix Geometric Solutions” in National Conference on Recent Advances of Mathematical Techniques in Science and Engineering held at Department of Mathematics, Osmania University, Hyderabad, 30-31 July, 2017.

- 22 Delivered invited talk “Performance Analysis of Network Nodes-Fractal Point Process, Queuing Theory, and Matrix Geometric Solutions” in 105th Indian Science Congress held at Manipur University, Imphal, 16-20 March, 2018.
- 23 Delivered invited talk on “Biot’s Theory of Poroelastic Solids-Study of Flexural Vibrations in Presence of Static Stress” in the National Conference on Mathematical Science and Applications held at Department of Mathematics, Osmania University, Hyderabad, 30-31 July, 2018.
- 24 Delivered invited talk on “Biot’s Theory of Poroelastic Solids-Study of Flexural Vibrations in Presence of Static Stress” in the 106th Indian Science Congress held at Lovely Professional University, Jalandhar, Punjab, Jan 3-7, 2019.
- 25 Delivered invited talk “ Impact Factor and H-Index” in One Week Workshop on Research Methodology (RM-19), Kakatiya Institute of Technology and Science (KITS), Warangal, January 7-11, 2019.
- 26 Resource Person for National Workshop on Faculty Recruitment and Development in Higher Education held at Department of Higher and Professional Education, National Institute of Educational Planning and Administration at NIEPA, New Delhi, Jan 14-16, 2019.
- 27 Delivered invited talk “ Research Metrics”, Online FDP on Applications of Mathematics in Engineering, Department of Mathematics, Mahatma Gandhi Institute of Technology (MGIT), Hyderabad, July 2-3, 2020.
- 28 Delivered invited talk “ Application of Fixed Point Theorem”, Online FDP on Applied Numerical Methods, Department of Mathematics and Statistics, University College for Women, Osmania University, Koti, 28-9-2020 to 3-10-2020.
- 29 Delivered online invited talk “ Plane Strain and Plane Stress Problems in Isotropic Poroelasticity”, in XXIV Congress of APTSMS & National Conference on Mathematics and its Applications (NCMA-2020), Department of Mathematics, Mahatma Gandhi University, Nalgonda, T.S., December 3-5, 2020.
- 30 Delivered online invited talk “ Biot’s Extension Theory- A Review”, CONIAPS XXVII On Recent Advances in Solid Mechanics and Seismology, Department of Mathematics, Kurukshetra University, Haryana, October 26-28, 2021.
- 31 Delivered online invited talk “ Applications of Stochastic Process”, on the occasion of National Mathematics Day, Department of Mathematics, Mahatma Gandhi University, Nalgonda, 22-12-2021.

# Publications

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## Wave Propagation in Poroelastic Solids

- 1 Malla Reddy P., Venugopal M., Rajitha G., Study of SH- wave propagation in an initially stressed triclinic layer sandwiched between transversely isotropic elastic and heterogeneous poroelastic half spaces, *Journal of Applied Mechanics and Technical Physics* (Accepted).
- 2 Venkanna D., Malla Reddy P., Study of symmetrical and anti- symmetrical edge waves in double porosity semi infinite thin plate- plane stress problem, *Mechanics of Solids* (Accepted).
- 3 Venkanna D., Malla Reddy P., Study of normal stresses in double porosity bore, *South East Asian Journal of Mathematics and Mathematical Sciences* (Accepted).
- 4 Venugopal M., Malla Reddy P., Transference of Love wave in orthotropic stratum resting on heterogeneous poroelastic half space in presence of initial stress, *South East Asian Journal of Mathematics and Mathematical Sciences* (Accepted).
- 5 Venugopal M., Rajitha G., Malla Reddy P., G- type wave propagation in an initially stressed fluid saturated viscoporoelastic layer lying over heterogeneous poroelastic half space, *Mechanics of Solids*, 2022. DOI: 10.3103/S0025654422010150.
- 6 Venkanna D., Venugopal M., Malla Reddy P., Study of axially symmetric waves in double porosity borehole containing fluid, *Mechanics of Solids*, Published online before print, 2022. DOI: 10.3103/S002565442202011X
- 7 Venkanna D., Malla Reddy P., Propagation of vibrations in a plane angular sector of double porosity elliptic cone, *International Journal of Applied and Computational Mathematics*, DOI:10.1007/s40819-021-01239-4, 2022.
- 8 Poonem Latha Madhuri., Rajitha Gurijala., Sindhuja Ala., Malla Reddy Perati., Initial stress and heterogeneity effects on torsional waves in dry sand half space between reinforced half space and poroelastic medium, *Engineering Computations*, DOI. Org/10.11108/EC-04-2021-2021.
- 9 Radhika Biragoni., BaluChandavath., Malla Reddy Perati., SrihariRao Apparusu., Investigation of torsional wave propagation in sandwiched magneto- poroelastic dissipative transversely isotropic medium, *Advances and Applications in Mathematical Sciences*, Vol. 20(9), pp. 2393-2418, 2021.
- 10 Rajitha G, Malla Reddy P., Study of radial vibrations in thick walled hollow dissipative poroelastic spherical shell on elastic foundation, *Materials Physics and Mechanics*, Vol. 44, pp. 411-422, 2020.
- 11 Rajitha G, Malla Reddy P., Study of torsional vibrations of composite poroelastic spherical shell-Biot's extension theory, *Journal of Solid Mechanics*, Vol. 12(3), pp. 649-662, 2020.
- 12 Sindhuja A, Rajitha G. Malla Reddy P., Shear wave propagation in magneto poroelastic medium sandwiched between self-reinforced poroelastic medium and poroelastic half space, *Engineering Computations*, DOI 10.1108/EC-11-2019-0505, 2020.
- 13 Poonem Latha Madhuri., Rajitha Gurijala., Malla Reddy Perati., Study of vibrations in viscoporoelastic cylinder over a initially stressed heterogeneous layer, *AIP Conference Proceedings*, 2020, [https:// doi. Org/ 10. 1063/ 5. 0014980](https://doi.org/10.1063/5.0014980).



- 14 Rajitha Gurijala., Poonem Latha Madhuri., Malla Reddy Perati., Study of waves in piezoelectric heterogeneous poroelastic layer over an initially stressed heterogeneous poroelastic half space, IOSR Journal of Engineering, Vol. 10(2), pp. 53-58, 2020.
- 15 Malla Reddy P, Sindhuja A, Rajitha G., Study of reflection and transmission of axially symmetric body waves incident on a base of semi-infinite poroelastic solid cylinder, Archieve of Applied Mechanics, Vol. 89(12), pp. 2507-2517, 2019.
- 16 B. Sandhya Rani, J. Anand Rao, P. Malla Reddy, Axially symmetric vibrations of a liquid-filled poroelastic thin cylinder saturated with two immiscible liquids surrounded by a liquid, Journal of Solid Mechanics, Vol. 11(2), pp. 272-280, 2019.
- 17 Ch. Balu, B. Sandhya Rani, M. Ramesh, P. Malla Reddy, Study of torsional vibrations in poroelastic dissipative thick-walled hollow cylinder in the presence of an initial stress, accepted for Special Topics and Reviews in Porous Media, 10 (5), pp.447-456, 2019.
- 18 Sandhya Rani B, Anad Rao J, Malla Reddy P, Study of radial vibrations in an infinitely long fluid-filled transversely isotropic thick-walled hollow composite poroelastic cylinders, Journal of Theoretical and Applied Mechanics, Sofia, Vol. 48, No. 3, pp. 31-44, 2018.
- 19 Rajitha G, Radhika B, Malla Reddy P, Srihari Rao A., Effect of elastic foundation on thick-walled hollow poroelastic spherical shell, International Journal of Pure and Applied Mathematics, Vol. 118 (20), pp. 4627-4635, 2018.
- 20 Ch. Balu, G. Rajitha, M. Ramesh, P. M. Reddy, Shear wave propagation in magneto-poroelastic dissipative isotropic medium sandwiched between two poroelastic half-spaces, International Journal of Pure and Applied Mathematics, Vol. 118, No. 20. pp. 4645-4656, 2018.
- 21 Rajitha Gurijala, Malla Reddy Perati, Analysis of radial vibrations in thick walled hollow poroelastic cylinder in the framework of Biot's extension theory, Multidiscipline Modeling in Materials and Structures, Vol. 14, Issue 5, pp. 970-983, 2018.
- 22 A. Srisailam, A. Yadaiah, P.Malla Reddy, Study of waves in poro and thermoelastic thin plates under plane stress conditions, Special Topics and Reviews in Porous Media, Vol.7(3), pp. 221-227, 2016.
- 23 Sandhya Rani B, Malla Reddy P and Shamantha Reddy G, Study of torsional vibrations in transversely isotropic poroelastic cylinders, Procedia Engineering, Vol. 127, pp.462-468, 2015.
- 24 Rajitha G, Malla Reddy P, Effect of static stress on plane strain vibrations in poroelastic solid cylinder, Procedia Engineering, Vol. 127, pp.727-734, 2015.
- 25 Manjula R, Malla Reddy P., Three dimensional vibrations of thermoporoelastic solids with two temperatures, Procedia Engineering, Vol. 127, pp.824-829, 2015.
- 26 B. Sandhya Rani and P. Malla Reddy, Study of torsional vibrations in thick-walled cylindrical bone in the framework of transversely isotropic poroelasticity, International Journal of Scientific and Innovative Mathematical Research, 3(1), pp. 79-83, 2015.
- 27 Ch. Balu, B. Sandhya Rani and P. Malla Reddy, Torsional vibrations of poroelastic thick-walled hollow cylinder in the presence of initial stress, International Journal of Scientific and Innovative Mathematical Research, 3(2), pp. 514-518, 2015.
- 28 B. Sandhya Rani, Ch. Balu and P. Malla Reddy, Study of torsional vibrations in an initially stressed composite poroelastic cylinders, Journal of Physics: Conference Series 662(2015),

doi:10.1088/1742-6596/662/1/012006.

- 29 Manjula Ramagiri, P. Malla Reddy, Axially symmetric vibrations in poroelastic solid cylindrical panel resting on elastic foundation, *Journal of Physics: Conference Series* 662 (2015), doi:10.1088/1742-6596/662/1/012007.
- 30 B. Sandhya Rani, P. Malla Reddy, G. Gangadhar Reddy, Dispersion study of plane strain vibrations in poroelastic solid cylinder with polygonal cross section, *Mathematics and Mechanics of Solids*, Vol. 22, 2, pp 38-52, 2017 (published online 2015).
- 31 B. Sandhya Rani, A. Srisailam, P. Malla Reddy, Flexural vibrations of finite poroelastic composite cylinders, *Sadhana, Indian Academy of Sciences*, Vol. 40, Part 2, pp. 591-604, 2015.
- 32 Malla Reddy P, Rajitha G., Investigation of torsional vibrations of thick-walled hollow poroelastic cylinder using Biot's extension theory, *Sadhana, Indian Academy of Sciences*, Vol. 40, Part 6, pp. 1925-1935, September 2015.
- 33 P. Malla Reddy, B. Sandhya Rani, Study of radial vibrations in cylindrical bone in the framework of transversely isotropic poroelasticity, *Journal of Vibration and Control*, Vol.22, 5, pp.1276-1287, 2016 ( Published online before print June 25, 2014).
- 34 Rajitha Gurijala, Srisialam Aleti, Malla Reddy Perati., Flexural vibrations of poroelastic solids in the presence of static stresses, *Journal of Vibration and Control*, Vol. 21(11), pp. 2266-2272, 2015.
- 35 Manjula R., Rajitha G., Srisailam A., Malla Reddy P., Flexural vibrations of poroelastic solid cylinder in the presence of static stress. *Special Topics and Reviews in Porous Media*, 6, 1-9, 2015.
- 36 Rajitha G, Malla Reddy P., Investigation of flexural vibrations in poroelastic elliptic cone, *Elsevier Proceedings of ICMS-2014 held at Chennai*, pp. 340-344, ISBN-978-93-5107-261-4, 2014.
- 37 Rajitha Gurijala, Malla Reddy Perati, Axially symmetric vibrations of composite poroelastic spherical shell, *International Journal of Engineering Mathematics*, 2014.
- 38 B. Shankar, C.N. Nath, S.A. Shah, P.M. Reddy, Vibrations in a fluid-loaded poroelastic hollow cylinder surrounded by a fluid in plain strain form, *International Journal of Applied Mechanics and Engineering*, 18, 1, pp. 189-216, 2013.
- 39 G. Rajitha, B. Sandhya Rani, Malla Reddy Perati, Plane strain vibrations of poroelastic elliptic cone, *Special Topics and Reviews in Porous Media*, 3,2, pp.157-168, 2012.
- 40 B. Sandhya Rani, T. Ramesh, P. Malla Reddy, Effect of normal stress under an excitation in poroelastic flat slabs, *International Journal of Engineering, Science and Technology*, Vol. 3, No.2, pp. 96-103, 2011.
- 41 Malla Reddy Perati, Sandhya Rani B., Tajuddin M., Dispersion study of axially symmetric waves in cylindrical bone filled with marrow, *International Journal of Biomathematics*, Vol. 4(1), pp. 109-118, 2011.
- 42 Malla Reddy Perati, Tajuddin M., Axially symmetric vibrations of poroelastic composite cylinder in the context of fretting fatigue, *Special Topics and Reviews in Porous Media*, Vol. 1(4), pp. 311-320, 2010.
- 43 Malla Reddy Perati, M. Tajuddin, Cylindrical stress waves in poroelastic flat slabs, *The Journal of Mechanics*, Vol.22, No.2, pp. 161-165, 2006.

- 44 Malla Reddy Perati, M. Tajuddin, Edge waves in poroelastic plates under plane stress conditions, *Journal of Acoustical Society of America*, 114, pp.185-193, 2003.
- 45 Malla Reddy Perati, M Tajuddin, Exact analysis of plane-stress vibrations of thick-walled hollow poroelastic cylinders, *International Journal of Solids and Structures*, 37, pp. 3439-3456, 2000.
- 46 Malla Reddy Perati, M Tajuddin, Wave propagation for cylindrical bore in poroelastic solid, *Mathematics and Statistics in Engineering and Technology*, Narosa, pp. 47-51, 1999.
- 47 Malla Reddy Perati, M Tajuddin, Edge waves in poroelastic plates, *Proceedings of Third International Conference on Vibration Problems (III ICOVP-1996)*, University of North Bengal, India, pp.92-94, 1996.

### **Internet Traffic Modeling and Performance Analysis of Router**

- 48 Abhilash Vollala., Malla Reddy Perati., Fitting model for self- similar traffic- time dependent Markovian process and second order statistics, *Statistics and Applications* (Accepted).
- 49 Malla Reddy Perati, Ravi Kumar Gudimalla, Performance analysis of asynchronous priority –based internet router under self-similar traffic input-queueing system with Markovian input and hyper-exponential services, *International Journal of Operation Research*, Inderscience, Accepted for publication, 2018.
- 50 Malla Reddy P., Ramesh R., Rajaiah D., Raj Kumar L.P., Ramana Murthy M.V., Convergence analysis of modified triangular and triangular splitting method for the solution of regularized linear system-circulant matrices, *International Journal of Applied Engineering Research*, 13, 9, pp. 6751–6759, 2018.
- 51 D. Ranadheer, D. Rajaiah, P. Malla Reddy, Block traingular and skew symmetric splitting method for steady state vector of linear system of eragodic block circulant markov chains, *Int. Journal of Computing Science and Mathematics*, Inder Science Publishers, Vol. 8, 4, 2017.
- 52 G. Ravi Kumar, L.P. Raj Kumar, P. Malla Reddy, Loss behavior analysis of asynchronous internet router under self-similar traffic input using MMPP/PH/C/K queueing system employing PBS method, *Int. J. Communication Networks and Distributed Systems*, Vol. 19,3, pp. 257-269, 2017.
- 53 G. Ravi Kumar, Malla Reddy Perati, Loss behavior internet router with priority based self-similar synchronous traffic –Multi server queueing system with Markovian input, Published online before print, *OPSEARCH*, Springer, Vol.54, 2, pp. 283-305, 2017.
- 54 Rajaih Dasari, Raj Kumar L.P. Malla Reddy Perati, Steady state probability vector of positive definite regularized linear systems of circulant stochastic matrices, *Linear and Multilinear Algebra*, Taylor and Francis, Vol. 65, 1, pp, 140-155, 2017.
- 55 R. Ramesh, D. Rajaiah, P. Malla Reddy, Internet router modeling using circulant Markov Modulated Poisson Process - Impact of Fractal Onset Time (FOT), *OPSEARCH*, Springer, Vol. 53, 2, pp. 317-328, 2016.
- 56 D. Mallikarjuna Reddy, D. Rajaiah, P. Malla Reddy, M. Krishna Reddy, Delay behavior of Internet Router under self-similar traffic via rational approximations, *Int. J. Communication Networks and Distributed Systems*, Vol. 14, No. 2, pp.134-144, 2015.
- 57 D. Rajaiah and P. Malla Reddy, Stability criteria of the state probability vector of circulant Markov Chains - Chapman-Kolmogorov differential equations, *Elsevier Proceedings of ICMS-2014* held at Chennai, ISBN-978-93-5107-261-4, pp. 836-839, 2014.




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## Skills

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- Languages     Strong reading, writing and speaking competencies for English.
- Coding         MATLAB,  $\text{\LaTeX}$ .
- Misc.           Academic research, teaching, and governance.

## Awards and Achievements

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- 2021     **State Best Teacher Award**, received from the Government of Telangana State, India.

## Personal Details

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-  **Date of Birth:** 6th May, 1967.
-  **Marital Status:** Married.