Bio-data

(as on April 26, 2021)

1. Name: Dr.Abdulvahid. H. Hasmani

2. Present Designation: Professor

3. Affiliation   :   Sardar Patel University
                               Vallabh Vidyanagar, Gujarat,
                               INDIA

3. Date of Birth :   07-02-1965

4. Total Experience :   23 years (Since November 1991)

5. Present Pay Scale :   53250 + AGP 10000; Pay band: 37400-67000

6. Address   **:**

         Work & Communication :   Department of mathematics
                                      Sardar Patel University
                                      Vallabh Vidyanagar-388120
                                      Gujarat

         Residential   18, Prince Park Society
                                      Near Sarvariya Masjid
                                      Off 100 Ft Road
                                      Anand-388001
                                      Gujarat

     E-mail: ahhasmani@gmail.com,   ah_hasmani@spuvvn.edu

7. Subject of Specialization :   Applied Mathematics, General Relativity

8. (a) Number of Papers Published   **: 30**

1. General Dynamical Equations for Dingle's Space-times, Mathematics Today XIA, 1993, 71-80. (jointly with J. Krishna Rao)
2. General dynamical Equations for Dingle's Space-time filled with a Non-perfect Fluid Distribution, in "New Directions in Relativity and Cosmology" (ed. V.de. Sabbata and T. Singh), Hadronic Press, Palm Harbor, FL 34682, 1997, 49-57, (jointly with J. Krishna Rao).
3. Algebraic Computations in General Relativity using MATHEMATICA, Prajna J. of Pure and Appl. Sciences, 15, 2007, 77-81 (jointly with G.A. Rathva)
4. Raychaudhari's Equation and Newman-Penrose Formalism, Bull. Calc. Math. Soc., 100, 2008, 557-562 (jointly with Zafar Ahsan)

5. A Study of Electric Part of Weyl Tensor in Godel Universe, The Aligarh Bulletin of Mathematics, 27 No. 1(2008) 47-52, (jointly with L.N. Katkar)

6. Newman-Penrose Formalism and Electric and Magnetic Parts of Weyl Tensor , Journal of Dynamical Systems and Geometrical Theories, 6, 2008, 89-94 (jointly with M.T. Joshi).

7. General Dynamical Equations for Dingle's Space-Times Filled with a Charged Nonperfect Fluid, Int. J. Theor. Phys., 48, 2009, 3510-3516 (DOI-10.1007/s10773-009-155-2).

8. Algebraic Computation of Newman-Penrose Scalars in General Relativity using MATHEMATICA", J. Sci. 1 (1) (2010), 82-83.

9. Algebraic Computation of Spin Coefficients in Newman-Penrose Formalism using Mathematica (jointly with P.I. Andharia) , Journal of Dynamical Systems and Geometrical Theories, 9, (2011), 27-36.
    (Permalink: http://dx.doi.org/10.1080/1726037X.2011.10698589)

10. A New Family of Similarity Solutions of Three-Dimensional MHD Boundary Layer Flows of Non-Newtonian Fluids Using New Systematic Group-theoretic Approach (jointly with Adnan K. Al-Salihi and M.G. Timol), Applied Mathematical Sciences, (2011), 5 (27), 1325-1336.

11. Algebraic Computation of Riemann Curvature Tensor for a 5D Space Using Mathematica, (jointly with VG Khambholja), Proc. National Conference on Recent Trends in Engineering & Technology, BVM Engg. College (13-14, May, 2011), Published online.

12. Using a Systematic Group Theoretic Method to Solve Flow of an Incompressible Second-Order Fluid past a Stretching Sheet (jointly with Adnan K. Al-Salihi and M.G. Timol), Mathematics Today Vol.27(June-2011), 6-17 ISSN 0976-3228 .

13. Interior Black-hole Solution with Anisotropic Fluid (jointly with V.G. Khambholja), Journal of Dynamical Systems and Geometric Theories, 10(1), (2012), 47-52. (Permalink: http://dx.doi.org/10.1080/1726037X.2012.106986069)

14. Solution of Maxwell's Equations for Charged Non-perfect Fluids Filling Dingle's Space-times (jointly with J. Krishna Rao), Jour. Tensor Society 6(2), (2012), 63-68 ISSN 0974-5428.

15. A Metric for 5D Interior Black-hole Solution (jointly with V.G. Khambholja), Journal of Dynamical Systems and Geometric Theories, 10(2), (2012), 125-128. (Permalink: http://dx.doi.org/10.1080/1726037X.2012.10698614#)

16. Similarity Methods in the Analysis for Laminar Forced Convection on a Horizontal Plate (jointly with Adnan K. Al-Salihi and M.G. Timol), WSEAS TRANSACTIONS on HEAT and MASS TRANSFER, 8(1), 2013, 7-16 (E-ISSN: 2224-3461).

17. Group Invariance for Non-linear Partial Differential Equations (Jointly with M. Patel, R. Patel and M.G. Timol), Int. J. Appl. Math and Mech. 9(13), 83-102, 2013.

18. The New Systematic Procedure in Group Theoretic Methods with Applications to Class of Boundary Layer Flows (with Adnan K. Al-Salihi and M.G. Timol), Int. J. of Advances in App. Math. and Mech., 1 (1), 47-60, 2013.
19. Curvature properties of interior black hole metric (jointly with R.Deszcz,V.G. Khambholjaand A.A. Shaikh), 2014,communicated. (arXiv:1401.6256 [math.DG])
20. Classification of semi-Riemannian Spaces using Mathematica (jointly with A.A. Shaikh and Haradhan Kundu), 2015, communicated**.**

8. (b) Publication of Books:

1. Worked as an **Author for the Text Books of Mathematics for Std. 11** (Sem.-I and II) by Gujarat State Board of School Textbooks.
2. Co-authored "Tutorial Workbook of Advanced Engineering Mathematics" (ISBN No. 978-81-927554-9-6).
3. Co-authored "Tutorial Workbook of Calculus" (ISBN No. 97 8-81-927554-8-9).
4. Co-authored "Tutorial Workbook Linear Algebra & Vector Calculus" (ISBN: 978-81927554-4-1).

10. Ph.D. Students: Completed: 06
Working:8

11. Other Academic Activities:

1. Worked as a Reviewer **for the Text Books of Mathematics for Std. 9** (Sem.-I and II English Medium) by Gujarat State Board of School Textbooks.
2. Worked as a Reviewer of **for the Text Books of Mathematics for Std. 6** (Sem.-I and II English Medium) by Gujarat State Board of School Textbooks.
3. Worked as a Resource Person in the preparation of Fundamental Glossary of Mathematics (English-Hindi-Gujarati) by Commission for Scientific and Technical Terminology, Ministry of Human Resource Development, Government of India.
4. Associated as a faculty member in the Post Graduate Department of Mathematics since 1995 and serving as a Professor. Received MSc, and Ph.D.(Mathematics) degrees from Bhavnagar University, Bhavnagar.
5. Contributed research in the areas of General Relativity, Differential Equations. 20 Research Papers.
6. Worked as an author and translator in the Text Books of Mathematics for Standard-11 (Sem-I &II) prepared by the Gujarat State Board of School Text Books, Gandhinagar. Also co-authored three books on Engineering Mathematics
7. Worked as a Lecturer in Mathematics at SS Engineering College, Bhavnagar and at BVM Engineering College, Vallabh Vidyanagar.