Certificate

This is to inform that the following publications have resulted from the research work of my Ph. D. student Sheth Dhwani Umesh, who wishes to submit her thesis titled **A Study of Circular and Elliptical Restricted Three Body Problems with Perturbations** to the Department of Mathematics, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara for the award of the degree of Doctor of Philosophy in Mathematics.

1. Dhwani Sheth, V. O. Thomas, Elbaz I. Abouelmagd and Vineet K. Srivastava : **Fifth order solution of halo orbits via Lindstedt–Poincaré technique and differential correction method.** *New Astronomy* (Elsevier) **87** (2021): 101585. ISSN: 1384-1076. doi: `https://doi.org/10.1016/j.newast.2021.101585` (Indexed in SCOPUS, Web of Science, SCI)

2. **Dhwani Sheth and V. O. Thomas** : Effects of mass ratio on halo orbits about L_1 and L_2. *AIP Conference Proceedings* **2451** 1 (2022): 020040. ISSN: 0094-243X. doi: `https://doi.org/10.1063/5.0095250` (Indexed in SCOPUS, SCI)

3. Dhwani Sheth and V. O. Thomas : Halo orbits around L_1, L_2, and L_3 in the photogravitational Sun–Mars elliptical restricted three-body problem. *Astrophysics and Space Science* (Springer) **367** 10 (2022): 1-20. ISSN: 0004-640X. doi: `https://doi.org/10.1007/s10509-022-04130-w` (Indexed in SCOPUS, Web of Science, SCI)

4. Dhwani Sheth, V. O. Thomas, Niraj M. Pathak and Elbaz I. Abouelmagd : Analysis of exterior resonant periodic orbits in the photogravitational ERTBP. *Archive of Applied Mechanics.* (Springer) **93** 5 (2023): 2097–2112. ISSN: 0939-1533. doi: `https://doi.org/10.1007/s00419-023-02374-8` (Indexed in SCOPUS, Web of Science, SCI)

5. Dhwani Sheth, Niraj M. Pathak, V. O. Thomas and Elbaz I. Abouelmagd : Periodic Orbits Analysis of Elliptical Sun-Saturn System. *Astronomy Reports* **67** 5 (2023): 520-535. doi: `https://doi.org/10.1134/S1063772923050104` (Indexed in SCOPUS, Web of Science, SCI)

Dr. V. O. Thomas
(Guide)
Professor
Department of Mathematics
Faculty of Science
The M.S. University of Baroda
Vadodara-390 002