CURRICULUM VITAE

Dr. VINEET KUMAR MANNADAY

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OBJECTIVE

To carry out research in the field of Astronomy & Astrophysics and to pursue a career in an esteemed institute which will motivate me in achieving the highest individual and professional growth in a manner to prove myself as an asset to the scientific community.

ACADEMIC PROFILE

- Ph.D. in Physics (2024) from Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)
- M.Sc. Physics (2014) from Pt. R. S. University, Raipur (C.G.) with 61.71 %
- B.Sc. Physics (2012) from Govt. J. Yoganandam C.G. College, Raipur (Pt. R.S. University, Raipur ,C.G.) with 61.94 %
- High. Sec. School (2009) from Govt. High. Sec. School, Bhoring (C.G. Board, Raipur) with 74.20 %
- High School (2007) from Govt. High. Sec. School, Bhoring (C.G. Board, Raipur) with 85.16%

ACHIEVEMENT

- Qualified for Graduate Aptitude Test in Engineering (**GATE**) 2016, 2017.
- Qualified for CG State Eligibility Test (**SET**), 2017.

Invited Talk

Delivered an invited talk entitled “Exoplanet” in the International workshop on Science and Technology in Astronomy Research (STAR-2022) held at SoS Physics and Astrophysics, Pt. Ravishankar Shukla University Raipur (C.G.) from 15^{th} – 18^{th} October, 2022.

RESEARCH EXPERIENCE

1. From January 18, 2016 to June 30, 2018 worked as a **Project Fellow** on UGC major research project entitled "Investigation of Close-in Extra-solar Planetary Systems through Photometric Follow-up of their Transits" awarded to Dr. Parijat Thakur, Dept. of Pure & Applied Physics, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur (C.G.).

2. Familiar to perform the data reduction and photometry using IRAF (Image Reduction and Analysis Facility) and AstroImageJ softwares of various astronomical objects like Extra-solar planetary systems, star clusters etc.

3. Performed light curve analysis of extra-solar planetary systems Qatar-1, TrES-3, TrES-5, WASP-12, WASP-5, WASP-48, WASP-103, WASP-68, WASP-73, WASP-88, WASP-10, WASP-24, WASP-67, HAT-P-23, HAT-P-12, XO-1, GJ1214 using the JKTEBOP code and Transit Analysis Package (TAP).

4. Since December 02, 2017 to May 10, 2024 worked as Ph.D. student at the Department of Pure & Applied Physics, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur (C.G.).

Publications:

A. **Paper Published:**

1. Revisiting the Transit Timing Variations in the TrES-3 and Qatar-1 systems with TESS data, **Vineet Kumar Mannaday** et al. 2022, AJ, 164, 198
2. The Transit Timing and Atmosphere of Hot Jupiter HAT-P-37b, Napaporn, A-thano et al. 2022, AJ, 163, 67 **(Vineet Kumar Mannaday as one of co-authors)**
3. Are There Transit Timing Variations for the Exoplanet Qatar-1b ?, Li-Hsin et al. 2021, **AJ**, 161, 108 **(Vineet Kumar Mannaday as one of co-authors)**
4. Non-Sinusoidal Transit Timing Variations for the Transiting Exoplanet HAT-P-12b, Devesh P. Sariya et al. 2021, **RAA**, 21, 97 **(Vineet Kumar Mannaday as one of co-authors)**
5. Probing Transit Timing Variation and its Possible Origin with Twelve New Transits of TrES-3b, **Vineet Kumar Mannaday**, Parijat Thakur, Ing-Guey Jiang, D. K. Sahu et al. 2020, **AJ**, 160, 47
6. Investigating Extra-solar Planetary System Qatar-1 through Transit Observations, Parijat Thakur, **Vineet kumar Mannaday**, Ing-Guey Jiang, D. K. Sahu, Swadesh Chand, 2017, **BSRSL**, 2018, 87, 132.

B. **Paper to be Submitted:**

1. Transiting Timing Analysis of hot Jupiter TrES-5b using Ground and Space based Transit Data, Vineet Kumar Mannaday et al. 2024 (under preparation).

C. Paper Presented at Conferences:

1. Further Probe of TTV and its Plaussible Causes in the Qatar-1 System with TESS Data, **Vineet Kumar Mannday**, Parijat Thakur, Ing-Guey Jiang, D. K. Sahu, John Southworth, L. Mancini, M. Vanko, Pavel Gajdos, Napaporn A-thano, and Devesh P. Sariya, "2nd National Conference on Signal Processing, Substantial Energy Materials and Astronomy and Astrophysics (NSSEMA)", held at Pt. Ravishankar Shukla University, Raipur (C.G.) during March 16th-18th, 2023
2. Revisiting the Transit Timing Variation of Extra-solar Planets TrES-3b and Qatar-1b with TESS data, Vineet Kumar Mannaday, "TESS Science Conference II" held virtually at the MIT, California, USA during August 2-6, 2021.
3. Exploring Transit Timing Variation of Extra-solar Planet TrES-5b through follow-up observations using the 2.0 m HCT, Vineet Kumar Mannaday, "HCT20 Science Meeting", held at the Indian Institute of Astrophysics (IIA), Bangalore, India during September 29-30, 2020.
4. Exploring the Existence of an Additional Planet in the hot-Jupiter Extra-solar Planetary System TrES-5, **Vineet Kumar Mannaday**, Parijat Thakur, Ing-Guey Jiang, D. K. Sahu, Martin Vanko et al., Exoplanet in Southern California 2020 Conference (ExoSoCal 2020), virtual meeting held at California during Sept. 14-15, 2020.
5. Probing Transit Timing Variation and its Possible Causes in the Hot-Jupiter System TrES-3, Vineet Kumar Mannaday, "Young Astronomer's Meet 2019", held at Kodaikanal Solar Observatory (KSO), Kodaikanal, Tamil Nadu, India during September 23-27, 2019.
6. Exploring the additional planet in the Extra-solar Planetary system Qatar-1, **Vineet Kumar Mannaday**, Parijat Thakur, D. K. Sahu, Ing-Guey Jiang, et al., International conference on "Exploring the Universe: Near Earth Space Science to Extra-Galactic Astronomy" held at the S. N. Bose National Center for Basic Sciences, Kolkata, India during 14-17 November, 2018.
7. Transit Timing Variations Analysis of Extra-solar Planet Qatar-1b, Parijat Thakur, **Vineet Kumar Mannaday**, Ing-Guey Jiang, D. K. Sahu, Swadesh Chand "National Conference on Signal Processing, Sustainable Energy Materials and Astronomy & Astrophysics" held at Pt. Ravishankar Shukla University, Raipur, (C.G.), India during March 28-30, 2017**.**
8. Comparative Study of JKTEBOP and TAP codes for the Light Curve Analysis of the Extra-solar Planetary Systems, **Vineet Kumar Mannaday,** Parijat Thakur, Ing-Guey Jiang, D. K. Sahu, Swadesh Chand ``National Conference on Signal Processing, Sustainable Energy Materials and Astronomy & Astrophysics" held at Pt. Ravishankar Shukla University, Raipur, (C.G.), India during March 28-30, 2017.
9. Transit Timing Variation Analysis of Extra-solar Planet Qatar-1b with Three New Transits, Parijat Thakur, **Vineet Kumar Mannaday**, Ing-Guey Jiang, D. K. Sahu, Swadesh Chand, "35th Meeting of the Astronomical Society of India (ASI-2017)" held at Birla Institute of Scientific Research (BISR), Jaipur during March 6–10, 2017.
10. Comparative Study of JKTEBOP and TAP codes for Estimating Physical and Orbital Parameters of Extra-solar Planetary Systems, **Vineet Kumar Mannaday**, Parijat Thakur, Ing-Guey Jiang, D. K. Sahu, Swadesh Chand, "35th Meeting of the Astronomical Society of India (ASI-2017)" held at Birla Institute of Scientific Research (BISR), Jaipur during March 6–10, 2017.

11. Investigating Extra-solar Planetary System Qatar-1 through Transit Observations, Parijat Thakur, **Vineet Kumar Mannaday**, Ing-Guey Jiang, D. K. Sahu, Swadesh Chand, International Conference on "Instrumentation and Science with 3.6-m and 4.0-m ILMT Telescope" held at the Aryabhatta Research Institute of Observational Sciences (ARIES), Nainital, India during November 5-18, 2016.

Workshop/School/Symposia Attended

1. "**2022 Sagan Exoplanet Summer Workshop on Exoplanet Science in Gaia Era**", hosted by the NASA Exoplanet Science Institute at the California Institute of Technology in Pasadena, CA, USA from July 25-29, 2022.
2. 2021 Sagan Exoplanet Summer Virtual Workshop on Circumstellar Disks and Young Planets, hosted by the NASA Exoplanet Science Institute at the California Institute of Technology in Pasadena, CA, USA from July 19-23, 2021.
3. **"Emerging Researchers in Exoplanet Science Symposium (ERES 2021)"** organized (virtually) by Cornell, Penn State, Princeton, and Yale Universities during May 24-26, 2021.
4. "**2020 Sagan Exoplanet Summer Workshop on Extreme Precision Radial Velocity**", hosted by the NASA Exoplanet Science Institute at the California Institute of Technology in Pasadena, CA, USA from July 20-24, 2020.
5. "**SERB SCHOOL ON OBSERVATIONAL ASTRONOMY**" held on 25 October - 14 November, 2017 at Tezpur University.

Computational Skill

- **O**perating System- Linux, Windows
- Programming- FORTRAN, IDL, Python
- Packages- IRAF, TAP, JKTEBOP, AstroImage, radvel, juliet
- Plotting software- Gnuplot, Grace, Matplotlib

FDP/FIP/Orientation Courses Completed:

1. **One Weak Online Faculty Development Programme** on ``**Art of Writing Research Paper",** organized by Atal Bihari Vajpayee Vishwavidyalaya, Bilaspur (C.G.) during May 22-27, 2023.
2. "**6th Guru Dakshta Faculty Induction Programme (FIP)**" organized by UGC-HRDC, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur (C.G.) during 4th July – 1st August, 2022.
3. **"State Level Orientation Programme for Newly Selected Assistant Professors, Sports Officers & Librarians"**, organized by IQAC Govt. E. V. P. G., College Korba, (C.G.) during June 9-11, 2022.

Teaching Experience

1. Assistant Professor (Physics) at Govt. Niranjan Kesharwani College, Kota, Bilaspur (C.G.) since 12/03/2022 to present
2. Assistant Professor (Physics) at LCIT College, Bodri, Bilaspur (C.G.) during 02/01/2021 – 30/06/2021
3. Part Time Lecturer (Physics) at Govt. Polytechnic College, Janjgir-Champa (C.G.) during 14/09/2015 – 21/2/2015

Administrative Experience

- Head of Department of Physics.
- Member of Admission Committee (B. Sc.-I)
- Convener of Scholarship Committee
- Member of SC, ST and OBC Student Welfare Committee
- Member of RUSA Committee
- Member of IQAC Committee