


Research Scholars Details

Name of Scholar	MITASHREE BEHERA	
Contact Details	Mobile No:9777313089 Email ID: mitashree1996@gmail.com Roll No: LAT 04/MATH/2020.	
Registration Number	80/2022/Mathematics	
Name of the Department & Address	Department of Mathematics, Sambalpur University, Jyoti Vihar, Burla, Sambalpur-768019, Odisha, India	
Name of the Supervisor and Correspondence address	Prof. Prasanta Kumar Ray, Professor Department of Mathematics, Sambalpur University, Sambalpur, India	
Details of Funding agency/scheme	CSIR Senior Research Fellowship	
Title of the research Topic	ON MULTIPLICATIVE RELATIONS IN SOME ALGEBRAIC STRUCTURES AND VARIOUS NUMBER SEQUENCES	
Abstract of research work (Max. 300 words)	This research explores multiplicative relationships within diverse algebraic structures, including algebraic number fields, and groups, and uncovers hidden multiplicative links among the terms of recurrent sequences. Combining theoretical analysis and computational methods, this study deepens our understanding of multiplicative relations and their applications in cryptography, solving Diophantine equations and unit behavior.	
Progress of the research work	Multiplicative relations among algebraic numbers satisfying cubic and quartic polynomials have been searched and multiplicative patterns within third-order recurrent sequences namely Padovan and Perrin sequences are investigated.	
Journal Publication	1. M. Behera, P. K. Ray, On Z dependency of algebraic integers satisfying cubic and quartic polynomials, Lith. Math. J., 62, 304-307(2022).	

	<ol style="list-style-type: none"> 2. M. Behera, P. K. Ray, Multiplicative dependence between Padovan and Perrin numbers, Bol. Soc. Mat. Mex, 52, 1-12(2023).
Conference attended	<ol style="list-style-type: none"> 1. Attended the International webinar on recent developments in Number Theory, KIIT University, 17-20 August, 2020. 2. Attended the A national webinar on Number Sequences and Musings on Mobius Maps, 10th November, 2020. 3. Attended the 2nd International webinar on recent development in Number Theory, KIIT University, 1-4 October, 2021. 4. Attended and presented the paper “On Z dependency of algebraic integers satisfying cubic and quartic polynomials” at International conference on Analysis and discrete Mathematics and 49th conference of OMS, 26-27 March, 2022. 5. Attended and presented the paper “Multiplicative dependence between Padovan and Perrin numbers” at 37th Annual Conference of RMS, SSN College of Engineering, Chennai, 6-8 December 2022. 6. Attended the Number Theory Workshop at NISER Bhubaneswar, 20-25 February 2023. 7. Attended and presented the paper “Multiplicative dependent pairs in the sequence of Padovan numbers” at 50th Annual Conference of OMS, IMA Bhubanewar, 21-22 January 2023.
Awards	<ol style="list-style-type: none"> 1. Awarded with Rank Holder Scholarship during M. Sc. 2. Cleared CSIR JRF at 2019 December