

Curriculum Vitae

SUMUKHA S

Assistant Professor
Department of Mathematics
Central University of Karnataka
Kadaganchi, Kalaburagi District
Karnataka, India, 585367.
E-mail: neerugarsumukha@gmail.com
Mobile: 6363739047

Permanent address:
Neerugaru,
Sagara Taluk,
Bhanukuli Post,
Karnataka, India, 577421.

PERSONAL DATA

Date of Birth : 21 March 1995
Sex : Male
Nationality : Indian

WORK EXPERIENCE

1. Worked as a Research Associate at IIT Gandhinagar under the supervision of Prof. Atul Dixit from August 2022 to January 2024.
2. Worked as a Postdoctoral Fellow at IIT Gandhinagar under the supervision of Prof. Atul Dixit from January 2024 to November 2024.
3. Working as an Assistant Professor at Central University of Karnataka from November 2024 till date.

ACADEMIC QUALIFICATIONS

Degree/Exam	Year	Institution/University
PhD (Mathematics)	17-01-2023	National Institute of Technology Karnataka, Surathkal, India Advisor: B. R. Shankar
M.Sc. (Mathematics)	2017	Mangalore University, Mangalore, India Aggregate: 87.95 %
B.Sc.	2015	PPC, Udupi-Mangalore University, Mangalore, India Aggregate: 91.28 %
PUC	2012	PPC, Udupi- Department of PU Education Karnataka, India Aggregate: 87 %
SSLC	2010	GHS Biligaru- SSLC Board Karnataka, India Aggregate: 93.12 %

RESEARCH INTERESTS

My broad area of research is number theory. My primary research interests are in analytic number theory, modular forms and special functions.

PUBLICATIONS

Published Works

1. Bibekananda Maji, Pritam Naskar, Sumukha Sathyanarayana, *A series associated to Rankin-Selberg L-function and modified K-bessel function* (Accepted for publication in Int. J. Number Theory). (18 pages)
DOI: 10.1142/S1793042125500356

2. Atul Dixit, Sumukha Sathyanarayana, N Guru Sharan, *Modular relations involving generalized digamma functions* J. Math. Anal. Appl. **539** (2024), 128479. (37 pages)
DOI: 10.1016/j.jmaa.2024.128479
3. Abhishek Juyal, Bibekananda Maji, and Sumukha Sathyanarayana, *An asymptotic expansion for a Lambert series associated to the symmetric square L-function*, Int. J. Number Theory **19-3**, 553-567, (2023). (15 pages)
DOI: 10.1142/S1793042123500264
4. Bibekananda Maji, Sumukha Sathyanarayana, and B. R. Shankar, *An asymptotic expansion for a twisted Lambert series associated to a cusp form and the Möbius function: Level aspect*, Results Math **77**, 123 (2022). (16 pages)
DOI: 10.1007/s00025-022-01655-y
5. Abhishek Juyal, Bibekananda Maji, and Sumukha Sathyanarayana, *An exact formula for a Lambert series associated to a cusp form and the Möbius function*, Ramanujan J **57**, 769–784 (2022). (16 pages)
DOI:10.1007/s11139-020-00375-7
6. S Sumukha and Sujeet Kumar Singh, *Rankin-Cohen brackets on Hermitian Jacobi forms and the adjoint of some linear maps*, Funct. Approx. Comment.Math. **65** (1), 61 - 72, (2021). (12 pages)
DOI:10.7169/facm/1890

Communicated Works

1. Atul Dixit, Sumukha Sathyanarayana, N Guru Sharan *Mordell-Tornheim zeta functions, Hurwitz lift and functional equations for Ishibashi-Herglotz functions* (submitted for publication). (40 pages)
arXiv:2405.07934
2. Sumukha Sathyanarayana, N Guru Sharan *The Mordell-Tornheim zeta function: Kronecker limit type formula, Series Evaluations and Applications*. (submitted for publication) (24 pages).

Ongoing Works

1. Atul Dixit, Sumukha Sathyanarayana, N Guru Sharan *Some interesting integrals involving digamma function and derivative of Deninger's function*.
2. Bibekananda Maji, Pritam Naskar, Sumukha Sathyanarayana *Hilbert Eisenstein series and Ramanujan formula for odd Dedekind zeta values*.

RESEARCH GUIDANCE

With Prof. Atul Dixit, jointly guided the master thesis of Mr. Uttam Kumar (2023-24) titled "Linnik's Approach to the Dirichlet L-functions and Finite Euler Product approximation for Riemann Zeta Function" in the Department of Mathematics, IIT Gandhinagar.

EXAMS QUALIFIED

NET- 2016 December, 2017 June

AWARDS/ACHIEVEMENTS

1. Secured second rank in M.Sc. from Mangalore University.
2. Received best paper award for the talk titled "An exact formula for a Lambert series associated to a cusp form and the Möbius function" in International Conference on Number Theory and Discrete Mathematics 2020, organized by Ramanujan Mathematical Society held at Rajagiri School of Engineering and Technology, Kochi.

- Received best paper award for the talk titled "An asymptotic expansion for a twisted Lambert series associated to a cusp form and the mobius function: level aspect" in the International Conference on Number Theory and Graph Theory, 2023, organized by Manipal Institute of Technology.

TALKS

- Presented a invited talk titled "Functional equations of Herglotz type functions" as a resource person in National Mathematics Day-2024, at Department of Mathematics, NITK Surathkal.
- Presented a invited talk titled "Mordell-Tornheim zeta functions, Hurwitz lift and functional equations of Herglotz-Zagier type functions" at Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar.
- Presented a invited talk titled "Mordell-Tornheim zeta functions, Hurwitz lift and functional equations of Herglotz-Zagier type functions" at Ahmedabad University.
- Presented a invited talk titled "Mordell-Tornheim zeta functions, Hurwitz lift and functional equations of Herglotz-Zagier type functions" at IIT Indore.
- Presented a talk titled "The codification of poetry and the emergence of combinatorics" in graduate seminar series at IIT Gandhinagar.
- Presented a contributory talk titled " A series associated to Rankin-Selberg L-function and modified K-bessel function", in 38-th Annual Conference of Ramanujan Mathematical Society 2023, held at IIT Guwahati.
- Presented a invited talk titled "Construction of Hermitian Jacobi forms using linear operators" in GANIT seminar series at IIT Gandhinagar, 2023.
- Presented a contributory talk titled "An asymptotic expansion for a twisted Lambert series associated to a cusp form and the mobius function: level aspect" in the International Conference on Number Theory and Graph Theory, 2023, organized by Manipal Institute of Technology .
- Presented a contributory talk titled "An asymptotic expansion for a twisted Lambert series associated to a cusp form and the Möbius function" in International e-Conference on Number Theory and Differential Equations, held at Central University of Karnataka, Kalaburagi, (2021).
- Presented a contributory talk titled "An exact formula for a Lambert series associated to a cusp form and the Möbius function" in International Conference on Number Theory and Discrete Mathematics 2020, organized by Ramanujan Mathematical Society held at Rajagiri School of Engineering and Technology, Kochi.
- Delivered an invited talk on Indian Mathematics as a resource person in "Ganita Poorna" program 2019-20 in Poornaprajna College, Udupi.

INTERNSHIP/WORKSHOPS/CONFERENCE ATTENDED

- Summer Research Fellowship sponsored by Indian Academy of Sciences during June-August 2016, under the guidance of Prof.Kaushal Verma, Indian Institute of sciences, Bengaluru.
- MTTS(Mathematics Training and Talent Search Programme)- O,2014 at Goa University, Goa.
- MTTS-I,2015 at SSN College, Chennai.
- GIAN(Global Initiative of Academic Networks) course on Transcendental numbers and special values of Dirichlet series 2017 at IIT Ropar.
- ATM (Advanced Training in Mathematics) School: Complex Analysis and Analytic Number Theory 2018 at SRTMU, Nanded.
- ATM School: Algenraic Number Theory 2018 at IIT Guwahati.

7. ATM School: AFS (annual foundation school) - II 2018 at Assam University.
8. ATM School: AFS - III 2018 at KSOM (Kerala School of Mathematics), Kozhikode.
9. ATM School: Modular Forms 2019 at IIT Guwahati.
10. ATM School: representation Theory of finite groups 2019 at IISER Tiruvananthapuram.
11. ATM School: Modular Forms and Galois Representation 2019 at IISER Tirupati.
12. Workshop on Multiple zeta values 2020 at KSOM.
13. International Conference on Number Theory 2020 at KSOM.
14. Workshop on Analytic Number Theory 2020 at KSOM.
15. ATM School: Jacobi forms 2022 at IIT Guwahati.
16. 38-th Annual Conference of Ramanujan Mathematical Society 2023, held at IIT Guwahati.

REFERENCES

1. Prof. B. R. Shankar
Professor
Department of Mathematical and Computational Sciences
National Institute of Technology Karnataka, Surathkal, Karnataka.
Mobile: 9482843872
email: shankarbr@gmail.com
2. Prof. Atul Dixit
Associate Professor
Department of Mathematics
Indian Institute Of Technology-Gandhinagar, Gujarat.
Mobile: 9687685929
email: adixit@iitgn.ac.in
3. Prof. Bruce C. Berndt
Professor Emeritus
Department of Mathematics
Center for Advanced Study
University of Illinois
1409 W. Green St. Urbana, IL 61801
email: berndt@illinois.edu
4. Prof. Bibekananda Maji
Associate Professor
Department of Mathematics
Indian Institute Of Technology-Indore , Madhya Pradesh.
Mobile: 8511869294
email: bibekanandamaji@iiti.ac.in