CAUVERY COLLEGE FOR WOMEN (AUTONOMOUS)

STAFF PROFILE

PERSONAL INFORMATION

1. Name : **S. VIDHYA**

2. Date of Birth : **08.07.1988**

3. Address :

Residential	Office
124/136, Sundarraj Nagar, **Subramaniapuram,** **Trichy – 620020.** **E-mail: s.vidhya1987@gmail.com** **Mobile: 9894276584**	**PG and Research Department of Mathematics,** **Cauvery College for Women,** **Trichy – 620018.** **E-mail:** **vidhya.maths@cauverycollege.ac.in** **Mobile: 9894276584**

ACADEMIC INFORMATION

4. Designation & Department: **Associate Professor, PG and Research Department of Mathematics**

5. Educational Qualification:

Degree	Year	College/University
Ph.D	2021	Cauvery College for Women (Autonomous), Trichy
SET	2016	Mother Teresa University, Kodaikanal
M.Phil	2011	Bharathidasan University, Trichy
M.Sc	2010	Bharathidasan University, Trichy
B.Sc	2008	Jamal Mohamed College, Trichy

6. Researcher Id:

GOOGLE SCHOLAR: https://scholar.google.com/citations?user=onflTIkAAAAJ&hl=en
ORCID: https://orcid.org/0000-0003-3800-3410
WEB OF SCIENCE: ABD-1837-2021
PUBLONS: https://publons.com/researcher/3314774/vidhya-shanmugam/
VIDWAN: https://vidwan.inflibnet.ac.in/profile/205628

7. Dissertation/ Thesis:

S.No	Research Degree M.Phil / Ph.D	Title of Dissertation / Thesis
1.	M.Phil.,	An Introduction to Stochastic Differential Equations
2.	Ph.D.,	A Zealous Endeavour on the Integral solutions of some Phenomenal Diophantine Equations and amazing Number Constellations

8. Experience :

Date of Joining	Institution	Year of Experience
15.06.2011	**Cauvery College for Women**	**15 years**

9. Areas of Specialization : Number Theory

10. Languages known : Tamil and English

11. SubjectsTaught :

UG	**Complex Analysis, Differential Calculus and Trigonometry Integral Calculus, Mathematical Statistics, Operations Research, Numerical Methods, Biostatistics, Algebra and Calculus, Calculus and Fourier Series, ODE, PDE, Laplace Transforms and Vector Analysis, Algebra, Analytical Geometry 3D and Trigonometry, Business Statistics, MATLAB Programming, Quantitative Aptitude for Competitive Examinations, Applied Statistics, Cyber Security, Innovation and Entrepreneurship.**
PG	**Real Analysis, Complex Analysis, Numerical Analysis, Topology, Linear Algebra, Advanced Operations Research, Differential Geometry, Quantitative techniques for Business Decisions, Algebraic Number Theory**

12. Details of Book Chapter Published:

S.No	Chapter Name	Book Name & Volume	Year of Publication	Print ISBN	eBook ISBN
1	Evaluation of the sum of the Polygonal numbers of even sides from Stella Octangula Number and Pronic Numner using the Division Algorithm	Recent Advances in Mathematical Research and Computer Science Vol. 2, Chapter 10	Oct 2021	978-93-5547-178-9	978-93-5547-179-6

2	Intrinsic solutions of the Pell Equation $x^2 = 5y^2 + 9^t$	Explorations in Diophantine Equations	November 2023	978-81-967488-3-8	978-81-967488-6-9
3	Some Non-extendable special Diophantine triples involving Nonagonal Pyramidal numbers	Explorations in Diophantine Equations	November 2023	978-81-967488-3-8	978-81-967488-6-9

13. Details of Publications

Journal Name & Volume	Year of Publication	ISSN Number	Name of the Paper	Impact Factor
International Journal of Engineering Research-Online Volume 4, Issue 1	Jan – Feb 2016	2321 - 7758	Rectangle with area as a special polygonal number	**3.601**
Jamal Academic Research Journal-An Interdisciplinary Special Issue	Feb 10&11 2016	0973-0303	Pythagorean triangle with Heptagonal number as perimeter	-
International Journal for Research in Applied Science and Engineering Technology Volume 4, Issue II	Feb 2016	2321-9653	Special pairs of Rectangles and Sphenic number	**5.011**
International Journal of Scientific Research in Science, Engineering and Technology Vol 2, Issue 2	March-April 2016	2394-4099	On the integer solutions of the Pell equation $x^2 – 79y^2 = 9^k$	**3.7**

International Journal of Multidisciplinary Research and Development Vol 3, Issue5	May 2016	2349-4182	On the integer solutions of the Pell equation $x^2 = 20y^2 - 4^t$	**5.72**
American International Journal of Research in Science, Technology, Engineering & Mathematics Vol 15, Issue 1	August 2016	2328-3580	Special pairs of Pythagorean triangles and 2-digit sphenic numbers	**5.01**
International Journal of Engineering Science and Computing Vol 6, Issue 6	June 2016	2321-3361	On the integer solutions of the homogeneous biquadratic Diophantine equation $x^4 - y^4 = 82(z^2 - w^2)p^2$	**5.611**
International Journal of Applied Research Vol 2, Issue 11	Nov 2016	2394-5869	On the negative Pell equation $y^2 = 21x^2 - 3$	**5.2**
International Journal of Academic Research and Development Vol 1, Issue 11	Nov 2016	2455-4197	Special pairs of Pythagorean triangles and 3-digit consecutive Sphenic numbers	**5.22**
International Research Journal of Engineering and Technology Vol 4, Issue 3	March 2017	2395-0056	Observations on Ternary Quadratic Equation $z^2 = 82x^2 + y^2$	**5.181**
International Journal of Statistics and Applied Mathematics Vol 2, Issue 3	May-June 2017	2456-1452	Observation on $y^2 = 6x^2 + 1$	**5.34**

International Journal for Research in Applied Science and Engineering Technology Vol 5, Issue IX	September 2017	2321-9653	Pythagorean Triangle with Area/Perimeter as a 4-digit Consecutive Sphenic Number	**6.887**
International Journal for Research in Applied Science and Engineering Technology Vol 5, Issue X	November 2017	2321-9653	Special Dio 3-tuples for Pronic Number-I	**6.887**
International Journal of Advanced Science andResearch Vol 2, Issue6	November 2017	2455-4227	Special Dio 3-tuples for Pronic Number-II	**5.12**
International Journal of Statistics and Applied Mathematics Vol 2, Issue 6	November-December 2017	2456-1452	A Novel Approach of determining Stella Octangula number and Pronic number using initial Value theorem in Z – Transform	**5.34**
Journal of Mathematics and Informatics Vol 10, Special Issue	December 2017	2349-0640	Construction of the Diophantine triple involving Stella Octangula number	**1.627**
International Journal for Research in Applied Science and Engineering Technology Vol 6, Issue I	January 2018	2321-9653	Construction of the Diophantine triple involving Pronic number	**6.887**

International Journal of Computer Sciences and Engineering Vol 6, Issue 7	July 2018	2347-2693	An Integral Solutions of Negative Pell's equation involving two digitSphenic numbers	**3.022**
International Journal of Research and Analytical Reviews Vol 6, Issue 2	June 2019	2348-1269	Construction of Gaussian Diophantine Quadruplewith Property D(16)	**5.75**
Adalya Journal (UGC CARE List II & WEB OF SCIENCE) Vol8, Issue 8	August 2019	1301 - 2746	Elevation of Stella Octangula number as a Special Dio 3-tuples and the non-extendability of Special Dio quadruple	**5.3**
INFOKARA Journal (UGC CARE LIST 'II'), Volume 8, Issue 12	Dec 2019 -	1021-9056	Formation Of Special Dio-Quadruple Involving Pronic Number With Property D (5)	**5.3**
Compliance Engineering journal (UGC CARE LIST 'II'), Volume 10, Issue 12	Dec 2019	0898-3577	Observation On Remarkable Diophantine Equation	**6.1**

International Journal of Scientific Research in Mathematical and Statistical sciences, Volume 6, Issue 6	Dec 2019	2348-4519	Appraisal of the Sum of the Polygonal Numbers of Even Order from Stella Octangula Number and Pronic Number Using the Division Algorithm	**1.021**
International Journal for Science and Advance Research in Technology , Volume 5 Issue 12	Dec 2019	2395-1052	Observation on $y^2 = 11x^2 + 1$	**5.888**
Parishodh Journal, Volume IX, Issue II	Feb 2020	2347 - 6648	Connection between special Pythagorean triangles and 2-digit sphenic numbers	**6.3**
Sambodhi	Oct – Dec 2020	2249 - 6661	Construction of Gaussian Diophantine quadruples with property $D(16k^2)$	**-**
Kala: The Journal of Indian Art History Congress	Dec 2020	0975 - 7945	Heptagonal Number and Pythagorean Triangles	**-**
International Journal for Research in Applied Science and Engineering Technology Vol 11, Issue II	February 2023	2321-9653	Non-Extendability of Special Dio 3-tuples involving Nonagonal Pyramidal Number	**6.887**
International Journal for Research in Applied Science and Engineering Technology	February 2023	2321-9653	An Integral Solution of Negative Pell Equation $x^2 = 5y^2 - 9^t$	**6.887**

Vol 11, Issue II				
International Journal for Research in Applied Science and Engineering Technology Vol 12, Issue III	March 2024	2321-9653	The Integer Solution of the Negative Pell Equation involving Palindrome Numbers	**7.538**
International Journal for Research in Applied Science and Engineering Technology Vol 12, Issue III	March 2024	2321-9653	Intrinsic Solutions to the Biquadratic Diophantine Equations $x^4 - y^4 = 65(z^2 - w^2)p^2$	**7.538**
International Journal for Research in Applied Science and Engineering Technology Vol 12, Issue III	March 2024	2321-9653	Intrinsic Solution on Quadratic Diophantine Equation $z^2 = 170x^2 + y^2$	**7.538**
International Journal for Research in Applied Science and Engineering Technology Vol 13, Issue III	March 2025	2321-9653	Exploring Integer Solutions of Negative Pell's Equation with Two-digit Keith Number	**7.538**
International Journal for Research in Applied Science and Engineering Technology Vol 14, Issue III	March 2026	2321-9653	A Graph-Theory based Encryption Model utilizing Spanning Tree Transformations	**7.538**

Journal of Advance and Future Research Vol 4, Issue 4	April 2026	2984-889X	Hamiltonian Cycle-based Encryption and Decryption for secure data transmission	**9.87**

14. Details of Papers Presented:

Date	Organizer	Name of the Seminar	Paper Name
15.09.2015	Shrimati Indira Gandhi College, Trichy	Recent Trends in Mathematics	Observations on ternary Quadratic Equation $z^2 = 82x^2 + y^2$
10.02.2016 & 11.02.2016	Jamal Mohamed College	National Conference on Graph Theory, Fuzzy graph Theory and their applications	Pythagorean Triangle with Heptagonal as Perimeter
11.12.2017	Jamal Mohamed College	International Conference on Mathematical Methodsand Computation	Construction of the Diophantine triple involving Stella Octangula number
07.01.2019 to 09.01.2019	St. Joseph's College	International Conference on Discrete Mathematics	Formation of Special Dio-Quadruple involving Pronic number with property D(5)

14. Details of Seminars / Conferences / WorkshopsAttended:

Year & Date	Organizer	Title	National / International	Topic
15.09.2015	Shrimati Indira Gandhi College, Trichy	Recent Trends in Mathematics	Regional Level	Observations on ternary Quadratic Equation $z^2 = 82x^2 + y^2$
10.02.2016 & 11.02.2016	Jamal Mohamed College	National Conference on Graph Theory, Fuzzy graph Theory and their applications	National Level	Pythagorean Triangle with Heptagonal as Perimeter
11.12.2017	Jamal Mohamed College	International Conference on Mathematical Methods and Computation	International Level	Construction of the Diophantine triple involving Stella Octangula number
07.01.2019 to 09.01.2019	St. Joseph's College	International Conference on Discrete Mathematics	International Level	Formation of Special Dio-Quadruple involving Pronic number with property D(5)

15. Details of Orientation / Refresher CourseAttended:

Date	Title of the Course	Organizer
08.05.2012 to 04.06.2012	74th UGC Sponsored Orientation Programme	Bharathidasan University, Trichy.
Aug-Oct 2019 (1week)	Faculty Development Programme-Matrix Analysis with Applications	NPTEL-AICTE
July – September 2023	Faculty Development Programme – Introduction to Abstract and Linear Algebra	NPTEL – AICTE
Jan-Apr 2025	Faculty Development Programme – Cryptography and Network Security	NPTEL – AICTE
Aug-Oct 2025	Faculty Development Programme – Introduction to Algebraic Graph Theory	NPTEL – AICTE

Jan-Feb 2026	Faculty Development Programme – Fundamental Algorithms: Design and Analysis	NPTEL – AICTE

16. Details of Incharge / Participation in ExtracurricularActivities:

(NSS, NCC, Sports, Games, Voluntary Association and Cultural Activities):

Nature of Activity	Period of Incharge
Cultural In charge	**2012 – 2014 and 2015-2016**
Institution's Innovation Council Ambassador	**2022 to till date**
Institution's Innovation Council Convenor	**2026 - 2027**

17. Details of Participation in Consultancy, Training, Developmentetc…:

S.No	Development Programme
1.	Certified Microsoft Innovative Educator

18. Details of Research Papers Reviewed

No. of Research Papers Reviewed: 40
No. of Book Chapter Reviewed: 1

Reviewer in

- Asian Research Journal of Mathematics.
- Journal of Pharmaceutical Research International **(Web of Science).**
- Asian Journal of Probability and Statistics.
- Journal of Advances in Mathematics and Computer Science.
- Current Journal of Applied Science and Technology.
- Asian Journal of Pure and Applied Mathematics.
- Asian Journal of Education and Social Studies.
- Asian Basic and Applied Research Journal.
- Asian Journal of Research in Animal and Veterinary Sciences.
- Asian Journal of Mathematics and Computer Research.
- Journal of Energy Research.

19. Lifetime Member in Bharata Ganita Parisad