Academic Profile

1. **Name** : Dr. K.B. Subramaniam

2. **Date of Birth** : 17th January 1950

3. **Address** : Permanent - *'Ganit Ashram'*,
135, Fine Avenue,
Nayapura, Kolar Road,
Bhopal - 462046.
Email: kbsubramaniam.1950@gmail.com

3. **Qualifications** : M.Sc., Ph.D. (Mathematics)

4. **Present Status** : <u>Former Principal</u>
Regional Institute of Education,
Shyamla Hills, Bhopal - 462013
<u>Former Joint Director</u>
Pandit Sunderlal Sharma
Central Institute of Vocational Education, Bhopal.

5. **Foreign Assignments** : Undertaken Advanced Training in
Teaching of Mathematical Education at
CAMET, Loughborough,
Leicestershire,
U.K. during 1983-84.

6. **Teaching Experience** : Over 52 years' experience of teaching of Mathematics
and Mathematics education; (including 3 years
PG experience in a local college, Safia
College, as an honorary lecturer in the
evening shift during 1971-1974.)

Can Teach in English, Hindi as well as Tamil Medium.
Has cured many kids suffering from Math-phobia.

7. **Job Profile** : In RIE Bhopal -
1. Worked as Principal from 30.11.09 to 31.01.12
(During this period, also given the additional
charge of Joint Director, PSSCIVE, Bhopal
for 21 months)
2. Worked as Professor of Mathematics from
23.12.03 onwards (During this period, also
became Head DESM and Dean of
Instructions)

8. **Major Contribution**   :

Number of Publications in reviewed/refereed/ISSN/MISC Journals - 43

Publications Prior to retirement –

Following 3 papers were published in Mathematics Teacher (USA)

1. 'Coordinate Note', Jan. 1979.
2. 'Problem 18 Feb 2014 Calendar', Vol 108, No.4, Nov 2014
3. A Note Noted', Nov. 1989.,1996, Vol. 27, No.4.

Following 16 papers were published in International Journal of Mathematics. Education in Science and Technology. (U.K.).

4. 'On Euler's Formula exp $(i\theta) = \cos \theta + \sin \theta$', 1979, Vol. 10, No.2
5. 'On a Formula of Integral Calculus', 1979, Vol. 10, No.2.
6. 'On the Cardinality of Real Numbers', 1981, Vol. 12, No.4.
7. 'On the Order of Power Set-II', Int. J. Math, Educ. Sci. Technol (U.K.) 1981, Vol. 12, No.4.

8. 'On the Equation of Circles Through Three Given Points', 1981, Vol. 12, No.6.
9. 'On the Equation of Pair of Straight Lines', 1981, Vol. 12, No.6.
10. 'Mathematical Induction', 1981, Vol. 12, No.6.
11. 'Necessary and Sufficient conditions', 1981, Vol. 12, No.6.
12. 'An Interesting Cross Question in coordinate geometry', 1981, Vol. 12, No.6.
13. 'Differential Equations That Could But Need Not Be Reduced to Homogenous Form', 1982, Vol. 13, No.4.
14. 'On Cayley - Hamilton Theorem', 1982, Vol. 13, No.5.
15. ''A Simple Computation of Square-Triangular Numbers', 1992, Vol. 23, No.5.
16. 'A Generalization of Prathiari's Theorem: A calculus-free approach', 1994, Vol. 25, No.3.
17. 'On the Construction of Square Triangular Numbers', 1994, Vol. 25, No.3.
18. 'A Generalization of Euler's Reproductive Properties of Triangular Numbers', 1994, Vol. 25, No.3.
19. 'A Divisibility Property of Square Triangular Numbers', 1995, Vol. 26, No.2.

Following paper was published in Fibonacci Quarterly USA (1988) Vol. 37, No. 3

20. 'Almost Square Triangular Numbers',

Number of Publications in Non-Reviewed Journals - 8

21. 'On the Square Roots of Surds', The Mathematics Education 1974, Vol. III, No. 4.
22. 'On the Experimental Determination of Acceleration due to Gravity of Simple Pendulum', *Vigyan Shikshak* 1974, Vol. 18, No. 3.
23. 'A Note on the Determination of Refractive Index of Glass in the form of Triangular Prism', *Vigyan Shikshak* 1975, Vol. 19, No. 1.
24. 'On the Order of Power Set', Research Journal (Science), Indore University, Vol. IV, No. 1, Aug. 1976.
25. 'On a Conjecture of Paul Erdos', Research Journal (Science), Indore University, Dec. 1980.
26. 'The Cardinality of Rationals', Mathematical Education, Vol. 7, No. 2, Oct. – Dec. 1980.
27. 'Comments on the paper of Kale and Agrawal', The Mathematics Education, 1980, Vol. XIV, No.1.
28. 'A Correlational Study of Internal and External Test Performance', Journal of Educational Research and Extension 1981, Vol. 18, No. 2.

Publications post retirement:
Following 8 papers were published in *Mathematical Gazette*

29.. *'Summing Squares' by counting cubes,* , 98 (March 2014) pp 131-132
30. 'A new proof that the rationals are countable', 98 (July 2014) pp 345
31. 'Proof without words (on sum of triangular numbers), , 99, No.544, (Mar 2015)
32. '*Cotangent expressed as a series of cosecants of multiple angles in powers of two"* Nov 2015
33 .Pythagoras Theorem: a Proof by contradiction 2018 Vol.102 No.553.
34 .Proof without words $\sin 2A + \sin 2B + \sin 2C = 4\sin A\sin B\sin C$, 2018 Vol.102, No.555.
35. Proof Without Words $\sin 3A = 3\sin A - 4\sin^3 A$.
36. On a Link between Triangular and Fibonacci Numers.
37 .Proof without words '*cotangent double angle identity*' (accepted for publication in *College Mathematics Journal,USA*

Following 6 papers were published in Octogon mathematical Journal Romania

38 'On Two Number Theoretic Functions', 2003, Vol. 11, No.1
39. 'New Arithmetical Functions', 2003, Vol. 11, No.1
40. Natural Log of a Natural Number as a Series Sum.
41. On Consecutive Prime Power Triplets.
42. Expressing N as N=q+kp, where p and q are primes.
43. Rational Approximation of e. In Vol.30,No.1, April 2022

Book Publication: **1**

Authored book entitled "Mom I Hate Maths" released in August 2016.
(A Mathematical Novel)
Some portions of the book were used by National School of Drama in 2 plays of their academic sessions under my guidance.
Additional 39 papers to appear in Octogon Mathematical Journal in the ensuing Volume.