

Bio-data of Dr Avinash Patil

1. Full Name: Dr AVINASH ADHAR PATIL

2. Date of Birth: 16-06-1984(Sixteenth June Nineteen Hundred Eighty Four)

3. Designation: Associate Professor

4. Addresses:

(a) Office: Department of Mathematics, JET's Z. B. Patil College, Dhule- 424002

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5. Educational Qualification: M.Sc., Ph. D.

(a) B.Sc.(Maths): In 2005, First class with Distinction from Pratap College, Amalner affiliated to KBC North Maharashtra University, Jalgaon.

(b) M.Sc.(Maths): In 2007, First class with Distinction from Department of Mathematics, SP Pune University.

(c) **Ph. D.** (Mathematics): In 2017 from SPPU, Pune.

(d) Qualified **NET** examination (with LS + JRF).

(e) Qualified **GATE** (Graduate Aptitude Test for Engineers) Examination(AIR 86)

(f) Qualified **SET** examination (with highest marks in Paper III-190 out of 200).

6. Awards/Prizes/Scholarships/Selections:

(i) Recipient of Padmshree **N.S. Venkateshan Gold Medal** for Best Ph. D Thesis in Mathematics for the year 2017 from SPPU.

(ii) Elected as a Member of the **Sectional Committee** of the section of Mathematical Sciences (including Statistics) in Indian Science Congress Association (**ISCA**)for the year 2016-17.

(iii) **AMU prize** of the year 2011 for presenting best research paper in the area of ALGEBRA at the 80th Annual Conference of the Indian Mathematical Society.

(iv) Short-listed for Young Scientist Award to be given by ISCA for 2015-16.

7. Teaching Experience:

12 years (under graduate) and 02 years (post graduate)

I taught more than 10 different courses for under graduate and post graduate students in Mathematics and commerce.

8. Member:

Life Member of the Indian Mathematical Society [IMS].

Life Member of the Indian Science Congress Association [ISCA].

9. Research:

Area of interest: Algebra (rings with involution).

Completed Ph. D. in 2017 and the title of the Thesis is Zero-Divisor Graphs of Rickart *-Rings, Dismantlable Lattices and Related Algebraic Structures from Savitribai Phule Pune University, Pune, under the guidance of Prof. B. N. Waphare, Department of Mathematics, Savitribai Phule Pune University, Pune.

List of Publications

- 1) N. K. Thakare, B. N. Waphare and Avinash Patil, Comparability Axioms in Orthomodular Lattices and Rings with Involution, *Algebra and its Applications, Springer Proceedings in Mathematics & Statistics* (2016) 241-257.
- 2) Avinash Patil, B. N. Waphare and V.V. Joshi, Perfect zero-divisor graphs, *Discrete Mathematics*, 340(4)(2017), 740-745 .
- 3) Avinash Patil and B. N. Waphare, On the zero-divisor graphs of Rickart *-rings, *Asian European Journal of Mathematics*, Vol. 10, No. 1 (2017) 1750015 (17 pages).
- 4) Avinash Patil and B. N. Waphare, Zero-divisor graphs of reduced Rickart *-rings, *Discussiones Mathematicae -General Algebra and Applications* Vol. 37 (1) 2017, 31-43.
- 5) Avinash Patil, B. N. Waphare, V. V. Joshi and H. Y. Paorali, Zero-divisor graphs of lower dismantlable lattices-I, *Mathematica Slovaca*, 67(2)(2017), 285-296.
- 6) Avinash Patil, B. N. Waphare and V.V. Joshi, Zero-Divisor graph of lower dismantlable lattices-II, *Mathematica Slovaca*, 68(1) (2018), 225-238.
- 7) Avinash Patil and B. N. Waphare, The zero-divisor graph of a ring with involution, *Journal of Algebra and Its Applications* Vol. 17, No. 3 (2018) 1850050 (17 pages).
- 8) Avinash Patil and B. N. Waphare, Characterizations of connected orthogonality graphs of projections of Rickart *-rings, *Quaestiones Mathematicae* 2018, 1-13.
- 9) Avinash Patil and B. N. Waphare, Natural partial order on rings with involution, *AKCE International Journal of Graphs and Combinatorics*, 16 (2019) 57-65.
- 10) Avinash Patil, Skew Polynomial Extensions of Semi Baer and Semi Quasi Baer Rings, *South-east Asian Bulletin of Mathematics*, 44 (2020) 99-104.
- 11) Avinash Patil, A. S. Khairnar and B. N. Waphare, Zero-divisor graph of a poset with respect to an automorphism, *Discrete Applied Mathematics*, 283(2020)604-612.
- 12) Avinash Patil, Rickart *-rings with planar zero-divisor graphs, *Palestine Journal of Mathematics*, 10(1) (2021) 50-52.
- 13) Avinash Patil and P. S. Momale, Idempotent graphs, weak perfectness, and Zero-divisor graphs, *Soft Computing* 25 (2021) 10083-10088.

- 14) Avinash Patil and Kiran Shinde, Spectrum of Zero-divisor graph of von Neumann Regular rings, Journal of Algebra and Its Applications, (2022) 2250193(13 pages).
- 15) Avinash Patil, A. S. Khairnar and P.S. Momale, Zero-divisor graph of a ring with respect to an automorphism, Soft Computing (2022) 26, pages2107–2119 (2022).
- 16) R.P. Mahale, K.F. Pawar and Avinash Patil, Wiener and Harary Index of the zero-divisor graph of Z_n , Discrete Mathematics Algo. And Appli. 17(6) 2450099(2025).
- 17) Avinash Patil, Dipika Patil, Coloring of Ring with respect to idempotents, Mathematica Bohemica, (online ready).
- 18) Avinash Patil, P.S. Momale and C. M. Jadhav, On the idempotents in a matrix ring, Journal of Indi. Math. Soc, (accepted).

Research Projects: One Research Projects of worth Rs. 2.5 Lacs is ongoing (Funded by the UGC).
