

1. **Name** : **Dr. KUNAL JULAL INGALE**
2. **Department** : Mathematics
3. **Current Designation** : Assistant Professor (AGP -7000)
4. **Gender** : Male
5. **Date of Joining:** 26-11-2010
6. **Category** : OBC
7. **Specialization:** Semiring Theory, Ternary Semiring Theory (Algebra)



**8. Educational Details:**

Name of the Degree/ Examination	Subject taken	Class obtained	Year of passing	University
B. Sc.	Mathematics	First Class with Distinction	2004	KBCNMU, Jalgaon
M. Sc.	Mathematics	First Class with Distinction	2006	KBCNMU, Jalgaon
M. Phil.	Mathematics (On Regular Semirings)	O-Grade	2009	KBCNMU, Jalgaon
Ph. D.	Mathematics (Theory of Ternary Semirings )	-	2015	KBCNMU, Jalgaon
SET	Mathematics	-	2009	-

**9. Teaching Experience (at UG and PG level) : 10 years**

**Courses Taught:**

i) At UG level-

Topics in Algebra , Computational Algebra, Modern Algebra, Real Analysis, Graph Theory, Discrete Mathematics, Operation Research, Differential Equations, Vector Analysis, Analytical Geometry, Laplace Transforms.

ii) At PG level-

Algebra , Field Theory, Linear Algebra, Commutative Algebra, Advanced Algebra, Algebraic Topology, Functional Analysis, Graph Theory, Topology.

**10. Awards/Recognition : Nil**

**11. Research:**

**i) Research Project: Minor Research Project (UGC), Completed: 01**

A MRP entitled on ‘Study of Noetherian and Weakly Regular Semirings’ have been completed in January 2014 (sanctioned amount- 0.4 lacs).

**ii) Research Publication: 14** (International = 09; National = 05)

- 1) J. N. Chaudhari and K. J. Ingale, *On partitioning and subtractive ideals of ternary semirings*, Kyungpook Math. Journal, 51(1)(2011), 69 - 76.(International)
- 2) J. N. Chaudhari and K. J. Ingale, *Prime avoidance theorem for co-ideals in semirings*, Research Journal of Pure Algebra, 1(9), 2011, 213-216. (National)
- 3) J. N. Chaudhari and K. J. Ingale, *A note on strongly Euclidean semirings*, International Journal of Algebra 6(6)(2012), 271 - 275. (International)
- 4) J. N. Chaudhari and K. J. Ingale, *A note on ideals in the semiring  $Z^+$* , Journal of Indian Mathematical Society Vol. 79, Nos. 1 - 4, (2012), 33 - 39. (National)
- 5) J. N. Chaudhari, H. P. Bendale and K. J. Ingale, *Regular ternary semirings*, Journal of the Advanced Research in Pure Mathematics, Vol.4, (3)(2012), 68-76. (International)
- 6) J. N. Chaudhari and K. J. Ingale, *Prime avoidance theorem in ternary semirings*, Journal of Advanced Research in Pure Mathematics Vol. 5, Issue. 1, 2013, pp. 80 - 85. (International)
- 7) J. N. Chaudhari and K. J. Ingale, *2-Absorbing subtractive ideals in semirings*, Journal of Indian Mathematical Society Vol. 81, Nos. 1-2, (2014), 23 - 35. (National)
- 8) J. N. Chaudhari and K. J. Ingale, *Ideals in the ternary semiring of non-positive integers*, Bull. Malaysian. Math. Sci. Soc.(2) 37(4) (2014), 1149–1156. (International)
- 9) J. N. Chaudhari, B. Davvaz and K. J. Ingale, *Subtractive extension of ideals in semirings*, Sarajevo Journal of Mathematics, 10(22), 2014, 13-20. (International)
- 10) J. N. Chaudhari and K. J. Ingale, *On  $n$ -absorbing ideals of the semiring  $Z^+$* , Journal of the Advanced Research in Pure Mathematics, Vol. 6, Issue. 1, 2014, 25-31. (International)
- 11) J. N. Chaudhari and K. J. Ingale, *On  $k$ -regular semirings*, Journal of Indian Mathematical society, 82(3-4), (2015), 1-11.(National)
- 12) J. N. Chaudhari and K. J. Ingale *On 2-absorbing primary  $k$ -ideals in semirings*, Journal of advanced Research in Pure Mathematics, 7(3), (2015), 81-88. (International)

- 13) J. N. Chaudhari and K. J. Ingale, *Subtractive extension of ideals in ternary semirings*, Thai Journal of Mathematics, Vol.14, (2016), No.3, 615-625.(International)
- 14) J. N. Chaudhari and K. J. Ingale, *3-Absorbing principal T-ideals in the ternary semiring of non-positive integers*, Journal of the Indian Mathematical Society Vol. 86, Nos. 1-2, (2019), 38 - 45. (National)

**iii) Research Guidance: Nil**

**12. Published Books : 08**

Sr. No.	Title of the Book	Authors	Publisher and Place	Year of Publication	Level at which recommended
1	MTH-103(A) Co-ordinate Geometry	Prof. P. B. Patil, Dr. J.S.V.R. Krishna Prasad, <b>Dr. K. J. Ingale</b>	Prashant Publicatio n, Jalgaon	2018	F.Y. B.Sc.
2	MTH-103(B) Graph Theory	Prof. M. D. Suryawanshi, Dr. S.R. Chaudhari, <b>Dr. K. J. Ingale</b>		2018	F.Y. B.Sc.
3	MTH-201 Ordinary Differential Equations	Prof. P. B. Patil, Dr. J.S.V.R. Krishna Prasad, <b>Dr. K. J. Ingale</b>		2019	F.Y. B.Sc.
4	MTH-202 Theory of Equations	Dr. J. N. Chaudhari, Dr. S.R. Chaudhari, <b>Dr. K. J. Ingale</b>		2019	F.Y. B.Sc.
5	MTH-302(A) Group Theory	Dr. J. N. Chaudhari, Dr. S.R. Chaudhari, <b>Dr. K. J. Ingale</b>		2019	S.Y. B.Sc.
6	MTH-302(B) Theory of Groups and Codes	Dr. S.R. Chaudhari, Dr. J. N. Chaudhari, <b>Dr. K. J. Ingale</b>		2019	S.Y. B.Sc.
7	MTH-401 Complex Variables	Dr. J. N. Chaudhari, Dr. S.R. Chaudhari, <b>Dr. K. J. Ingale</b>		2019	S.Y. B.Sc.
8	MTH-404 Vector Calculus	Dr. S.R. Chaudhari, Dr. J. N. Chaudhari, <b>Dr. K. J. Ingale</b>		2019	S.Y.B.Sc.

**13. Papers presented in Conferences: 11** (International= 02 ; National=09)

A) International:

- 1) Presented the research paper on '*On subtractive extensions of ideals in the semiring  $Z^+$* ' in 'International Conference of Mathematical Sciences' organized by Shivaji Science College, Nagpur held during 28-31 Dec. 2012.
  - 2) Presented a paper '*Generalization of Prime ideals in ternary semiring  $Z_0^-$* ' in international conference on 'Current Scenario in Pure and Applied Mathematics', at Kongunadu Arts and Science College, Coimbatore, during 14-16 Feb. 2018.
- B) National:
- 1) Presented the research paper '*On partitioning and subtractive ideals of ternary semirings*' in a National conference of 'Indian Mathematical Society' organized by SVNIT, Surat, held on 27-30 Dec. 2010.
  - 2) Presented the research paper '*A note on principal ideals in semirings*' in a National conference of 'Indian Mathematical Society' organized by SRTM University, Nanded, held on 27-30 Dec. 2011.
  - 3) Presented the research paper '*A note on subtractive extensions of ideals in semirings*' in a National conference of 'Indian Mathematical Society' organized by Banaras Hindu University, Varanasi, held on 22-25 Jan. 2013.
  - 4) Presented the research paper '*On Closure of Ideals in Ternary Semirings*' in National conference on 'Current Practices in Mathematics, Statistics and Actuarial Sciences' organized by N. M. U. Jalgaon, held on 07<sup>th</sup>-08<sup>th</sup> March 2013.
  - 5) Presented the research paper '*On primary ideals in the ternary semiring  $Z^-$* ' in a State level conference '*Recent Trends in Mathematics and its Applications*', organized at ACS College, Jamner, 16-17, December, 2013.
  - 6) Presented the research paper '*On 2-absorbing primary ideals in the semiring  $Z^+$* ' in an 80<sup>th</sup> National conference of Indian Mathematical Society at Indian School of Mines, Dhanbad during 27-30, December 2014.
  - 7) Presented the research paper '*On 2-absorbing primary subtractive ideals in semirings*' in National conference on Recent Trends in Applied Sciences, at M.J.College, Jalgaon during 30-31, January 2015.
  - 8) Presented a paper '*Ideals in quotient ternary semirings*' in national conference on '*Role of Mathematical in Science and Technology*', at Arts, commerce and science college, Bodwad, on 17 Jan. 2017.

- 9) Presented a paper '*3-absorbing Ideals in quotient semirings*' in national conference on 'Algebra, Analysis and Number Theory', at School of Mathematical Sciences, North Maharashtra University, Jalgaon, during 13-14 Jan. 2018.

#### **14. Conferences Attended:**

- 1) Attended 14<sup>th</sup> International conference (CONIAPS-XIV) on 'Physical Sciences Interface with Humanity' at SVNIT, Surat, during 22-24 Dec. 2011.
- 2) Attended a National conference on 'Recent Advances in Mathematical Sciences-2016' organized by Sant Gadge Baba Amrawati University, during 17-18 June 2016.

#### **15. Invited Talks/Guest Lectures:**

- 1) Delivered lectures on 'Linear Algebra' in NET/SET Coaching workshop at School of Mathematical Sciences, North Maharashtra University, Jalgaon, during 7-9 December 2011.
- 2) Delivered lectures in 'Workshop in Mathematics' at Dr. A. G. D. Bendale Mahila Mahavidyalaya, Jalgaon during 23-24 Aug. 2012.
- 3) Delivered lectures on 'Advanced Algebra' for M.Sc. II year students of 'IDEAL' at IDEAL, North Maharashtra University, Jalgaon, on 22 Feb. 2015.
- 4) Delivered lecture on 'Recent Trends in Mathematics' at Smt. P.K.Kotecha Mahila Mahavidyalaya, Bhusawal on 23 March 2016.
- 5) Delivered lecture on 'Algebra:Group Homomorphism' for S.Y.B.Sc. students at ACS College, Bodwad on 10 Aug. 2018.
- 6) Delivered invited talk on 'Galois Theory' at L.K. Dr. P. R. Ghogrey Science College, Dhule on 21 October 2018.

#### **16. Responsibilities Shouldered:**

- 1) Chairman, Budding Research Committee (2018-19).
- 2) Member of B.O.S. in Mathematics, M. J. College (Autonomous), Jalgaon (June 2019 onwards).
- 3) Chairman, Earn and Learn Scheme, (2019-20).

#### **17. Extra-Curricular Activities:**

- 1) Assistant Program Officer in NSS from 2011 to 2013.
- 2) Program Officer in NSS from 2014 to 2016.

#### **18. Others :**

1) Guided Three Budding Research Projects.

2) Participated in **the STEM Teachers training workshop on Research-Based Pedagogical Tools (Level I)** organized by IISER Pune during 26 Feb. 2017 to 1 March 2017.

**19. Contact Details:**

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**(Kunal J. Ingale)**