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## Faculty Profile

1. Name: Dr. Ram Prakash Somani



2. Designation: Associate Professor

3. Department: Mathematics

4. Educational Qualification:

Level	Name of University/Board	Year	Title/ Remark/ Medal
Secondary	Rajasthan Board	1984	I Division
Hr. Secondary	Rajasthan Board	1985	I Division
B.Sc.	MDS University, Ajmer	1988	I Division
M.Sc. (Maths)	MDS University, Ajmer	1990	I Division
Ph.D.	Banasthali Vidyapeeth	1999	Graphs, Rings and Coloring

5. Experience: Teaching / Research up to 2021

UG	28	PG	28	Research	
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6. Membership (Academic Bodies/ Research societies):

- (a) Member of BoS University of Kota
- (b) Member of Rajasthan Ganita Parishad
- (c) Member of Indian Mathematical Society

7. M.O.O.C (Developed by Faculty): Nil

8. Awards Received: 'For outstanding performance and for being among the 6 top candidate in Mathematics in the joint CSIR-UGC Eligibility Test for JRF and Lectureship, 1990' given by CSIR HRD.

**9. Academic Courses Attended:**

Course	Place	Sponsoring Agency	Duration
Orientation Course	ASC Univ of Rajasthan, Jaipur	UGC	26-03-2001 to 21-04-2001
Refresher	ASC Univ of Raj, Jaipur	UGC	27-11-2000 to 16-12-2000
	ASC Goa University, Panji	UGC	25-02-2005 to 17-03-2005
	ASC JNV Univ Jodhpur	UGC	05-09-2005 to 24-09-2005
Others (Workshop/ Summer School/ Camp etc.)			
Online F.D.P (Faculty Development Programme)	NEP PDP Online at Kota	IGNOU	12-06-2023 to 20-06-2023
Search and Rescue Course	NAGPUR	National Civil Defence College	January 10-16, 2007
Pre Commission Course	Kamptee, Nagpur	NCC OTA	20-11-2006 to 17-02-2007
Refresher Course NCC	Kamptee, Nagpur	NCC OTA	26-10-2009 to 24-11-2009

**10. Seminar/ Conference :**

Name of Symposium/ Seminar/Conference	International/ National/ Regional	Organized By	Title of Paper presented	Year	Topic
9 <sup>th</sup> Annual Conf of Rajasthan Ganit Parishad	National	Banasthali Vidyapith		Feb 8-9, 1997	Demands from a Mathematician in Present day Technology and Society

<b>College &amp; University Teacher Conference</b>	<b>National</b>	<b>EDUCATION WING, RERF &amp; B K Ishwariya Vishwa Vidyalaya, Mount Abu</b>		<b>June 12-15, 2004</b>	<b>New Knowledge for a New Culture</b>
<b>Seminar</b>	<b>National</b>	<b>Banasthali Vidyapith</b>		<b>March 5-6, 2006</b>	<b>Recent Trends in Combinatorics and its Applications</b>
<b>17<sup>th</sup> Annual Conference of RGP</b>	<b>National</b>	<b>Dept. Of Maths, Govt Meera Girls College, Udaipur</b>		<b>February 10-11, 2006</b>	<b>Mathematical Modelling</b>
<b>19<sup>th</sup> Annual Conference of RGP</b>	<b>National</b>	<b>Dept. Of Maths, Jaipur Engineering College, Jaipur</b>	<b>Graceful Labeling of Some Trees</b>	<b>January 18-19, 2008</b>	<b>Numerical Techniques and Their Applications in Maths</b>
<b>20<sup>th</sup> Annual Conference of RGP</b>	<b>National</b>	<b>Dept. Of Maths,</b>	<b>Various Types of Magic Square and their Construction Method</b>	<b>January 18-19, 2009</b>	<b>Emerging Fields in Mathematics and their Interdisciplinary Uses</b>
<b>Seminar</b>	<b>Regional</b>	<b>S K Govt. P.G. College, Sikar</b>		<b>January 12, 2013</b>	<b>APQR and ARS</b>
<b>Seminar</b>	<b>Regional</b>	<b>S K Govt. P.G. College, Sikar</b>		<b>January 27, 2013</b>	<b>APQR and ARS</b>
<b>Workshop</b>		<b>DCE and Spoken Tutorial, IIT Mumbai</b>		<b>January 9, 2014</b>	<b>Smart/ E-Class</b>
<b>26<sup>th</sup> Annual Conference of RGP</b>	<b>National</b>	<b>University College of Engineering, RTU, KOTA</b>		<b>February 23-24, 2015</b>	<b>Computational Mathematics in Engineering</b>

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<b>Conference</b>	<b>National</b>	<b>Career Point University, KOTA</b>	<b>Some generating relations associated with extended Gamma and Beta functions</b>	<b>June 19-20, 2015</b>	<b>Advanced Trends in Computer Science &amp; Mathematical Techniques</b>
<b>Seminar</b>	<b>National</b>	<b>Vivekanand Shodhpith, University of Kota, KOTA</b>	<b>Science and Spirituality in Present Perspective</b>	<b>September 19-20, 2017</b>	<b>Science, Spirituality and Vivekananda</b>
<b>Seminar</b>	<b>State</b>	<b>Itihas Sankalan Samiti, Kota</b>		<b>September 30, 2017</b>	<b>Ancient Indian Literature Heritage - History Writing</b>
<b>Workshop</b>	<b>Division</b>	<b>YDC, Govt. College, KOTA</b>		<b>October 24, 2017</b>	<b>Our role in Cleanliness and Road Safety and Youth</b>
<b>Seminar</b>	<b>State</b>	<b>RUCTA(R) Govt. College, KOTA</b>		<b>September 26, 2018</b>	<b>Inter Relationship of Knowledge &amp; Language</b>
<b>Workshop</b>	<b>National</b>	<b>DST and JDB Govt College, KOTA</b>		<b>February 19, 2020</b>	<b>Intellectual Property Rights and Awareness</b>
<b>National Webinar</b>	<b>National</b>	<b>Dept of Computer Sc and Info, UoK</b>		<b>June 25, 2021</b>	<b>Online Teaching-Learning: Cyber Security Issues &amp; Challenges</b>

<b>National Workshop</b>	<b>National</b>	<b>Govt College, Kota</b>		<b>February 22-26, 2022</b>	<b>Operation and Maintenance of Laboratory Equipment</b>
<b>National Seminar</b>	<b>National</b>	<b>Dept of Maths, Govt College, Kota</b>	<b>Different type of Matrices Associated with Graphs and Their Applications</b>	<b>October 7, 2022</b>	<b>Interdisciplinary Applications of Mathematics</b>
<b>National FDP/SDP Conclave</b>	<b>National</b>	<b>RERF and PBKIVV, ORC, GURUGRAM</b>		<b>29-09-23 to 01-10-23</b>	<b>Educators - Creating Leaders for Future</b>
<b>National Conference</b>	<b>National</b>	<b>Dept of Chemistry, Govt College, Kota</b>	<b>Topological Indices of Mephedrone</b>	<b>6-7 October 2023</b>	<b>Recent Advances in Science and Technology</b>

**11. Organizing Sec./Convener of conference/seminar/webinar :**

Conference/Seminar Title	Year
<b>Interdisciplinary Applications of Mathematics (Organizing Secretary)</b>	2022

**12. Resource Person:**

In training Programme	Mathematics Teaching in School Education (07.01.2022), Orientation Course for School Teacher, District Coordinator, DIET Kota
In conferences/Seminars (Chair/Co-Chair/of Session)	Workshop on Question Repository (Maths) Feb 6-8, 2014 VMOU, KOTA
Invited Talk	Yoga and Tension Management (15.09.2022), Women Cell, Govt College, Kota

**13. Research Publications:**

<b>Title of Paper</b>	<b>Name of Journal with Impact factor</b>	<b>ISSN No. and UGC No. with Year</b>	<b>Citation Index</b>	<b>Impact Factor</b>	<b>Google Index</b>
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<b>Various Graphical Representation of Commutative Rings</b>	<b>The Mathematics Education</b>	<b>0047-6269</b> <b>Vol XLI, No.2,</b> <b>June 2007</b>			
<b>Relationship between Partition of Natural Number and Complete Binary Tree</b>	<b>The Mathematics Education</b>	<b>0047-6269</b> <b>Vol XLII,</b> <b>No.1, March</b> <b>2008</b>			
<b>On Certain Class of Euler Type Integrals Involving Extended and Multiparameter Hurwitz Lerch Zeta Functions</b>	<b>South East Asian Journal of Mathematics and Mathematical Sciences</b>	<b>0972-7752</b>  <b>Vol.12, No.1,</b> <b>April 2016</b>			
Laplace-Decomposition Methods to Study Solitary Wave Solutions of Coupled Non Linear Partial Differential Equation Vol 5, No.1 January 2018 pp: 17-22	Journal of Emerging Technologies and Innovative Research	2349-5162		7.95	
A Description of Non-Linear Wave Equations by Homotopy Analysis Transform Method Vol 8, No. 6, June 2020 pp: 4833-4839	International Journal of Creative Research Thoughts	2320-2882		7.97	
Topological Indices Of Zero Divisor Graphs And Their Compliments Vol 10, No. 12, December 2021 pp: 7751-7755	International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering	E-2278-8875 P-2320-3765		8.317	
Introducing New Exponential Gourava Indices for Graphs Vol 11, No. 3, May-June 2023 pp: 1-5	International Journal of Mathematics and Statistics Invention	2321 - 4759			
SPECTRAL AND TOPOLOGICAL CHARACTERISTICS OF INSECTILE GRAPH Vol 10, No. 6, June 2023 pp: i35-i44	Journal of Emerging Technologies and Innovative Research	2349-5162		7.95	
SOME NEW GRAPH OPERATIONS AND THEIR FIRST AND SECOND ZAGREB AND GOURAVA INDICES Vol 10, No. 8, August 2023 pp: d567-d577	Journal of Emerging Technologies and Innovative Research	2349-5162		7.95	
HIGHWAY CONNECTIVITY OF TIER 2 CITIES OF RAJASTHAN USING CONNECTIVITY AND	INTERNATIONAL JOURNAL OF RESEARCH AND	<b>E-ISSN</b> <b>2348-1269,</b> <b>P- ISSN</b>		7.17	

TOPOLOGICAL INDICES Vol 10, No. 4, October 2023 pp :501-509	ANALYTICAL REVIEWS	2349-5138			
HIGHWAY CONNECTIVITY OF TIER 2 CITIES IN RAJASTHAN AND NEIGHBOURING STATES: A STUDY USING CONNECTIVITY AND TOPOLOGICAL INDICES Vol 10, No. 12 Dec 2023 pp: a549-a562	Journal of Emerging Technologies and Innovative Research	2349-5162		7.95	
The Gourava Co-Indices of Graph Vol 9, No.. 4 April 2024 pp:21-26	International Journal of Innovative Science and Research Technology	2456-2165		7.176	

#### 14. Research Projects:

Title of the Project	Year	Name of funding agency	Fund available/ utilized	Present status
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#### 15. Research Supervision:

Basic Field of specialization: Discrete Mathematics, Functional Analysis

##### ☞ Ph.D.

Name of Student	Title of thesis	Present status	Date and Year of Award, if so
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##### ☞ M. Phil.

Name of Student	Title of Dissertation	Present status	Date and Year of Award, if so
Chanchal Sharma	A Study of Graph Theory and its Applications in Algebra	AWARDED	2005
Devendra Singh Rajawat	A Study of Graph Theory and Various Types of Labelled Graphs	AWARDED	2007
Ritesh Agarwal	Characterization of Matrices and Magic Labelling of Graphs	AWARDED	2007
Bhawana Agarwal	Solving Differential Equations Using Symmetry Groups	AWARDED	2008
Mamta Verma	A Study of Various Types of Magic Squares	AWARDED	2008
Monika Jain	Squaring the Plane	AWARDED	2009

Surendra Nagar	A Study of Coloring, Matching & Covering of Graphs	AWARDED	2010
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**16. Monograph/ Book / Chapter (in Edited Book)/Chapters in study material of Open universities**

**Book (Single Author)**

Title of Book	ISBN/ ISSN No.	Publisher with Place	Year of Publication

• **Chapter(s) in Book (Edited / multi-author)**

Title of Chapter	Authors / Editors	Name of the Book with ISBN/ ISSN No.	Publisher with Place	Year of Publication
COORDINATE GEOMETRY (2D)	ARUN KUMAR, R P SOMANI, MANISH GAUR, G S SISODIA	ISBN: 81-8142-15 4-X	R B D PUBLISHING HOUSE, JAIPUR	2018
INTEGRAL CALCULUS	SANJAY JAIN, R P SOMANI, MANISH GAUR, YOGESH SHARMA	ISBN: 81-8142-15 1-5	R B D PUBLISHING HOUSE, JAIPUR	2018

**13 Extra Curricular Activities:**

**14 Collaborations and associations**

**15. Any Other Relevant Information/Contributions**

**Nodal Officer of**

(a) Incharge, Exam Cell

(b) AISHE

(c) Sampark Portal