



**Name:** Dr. Prakashkumar Arvindbhai Dabhi

**Qualification:** M.Sc., Ph.D. (Math.)

**Address :** Department of Mathematics,  
Sardar Patel University,  
Vallabh Vidyanagar– 388120,  
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**Affiliation :** Sardar Patel University

#### Summary of Scholastic and Research Activities:

- Associated as a faculty member in the Postgraduate Department of Mathematics since 2006 and serving as an Assistant Professor Received MSc, and Ph.D.. (Mathematics) degrees from Gujarat University and Sardar Patel University respectively.
- Qualified CSIR–NET twice (2004 and 2005).
- Qualified GSLET 2004.
- Won Gold medal in B.Sc. by standing University first (subject wise as well as overall) in Gujarat University.
- Won Gold medal in M.Sc. by standing University first (subject wise as well as overall) in Gujarat University.
- First prize in the Prof. A. R. Rao Mathematics Competition in B. Sc. In the year 2002.
- Second prize in the Minaxi Lalit Science Award Test in B. Sc. In the year 2002.
- I was honored to witness the Republic Day Parade, 2003, from Prime Ministers' Box at Rajpath, New Delhi, as a guest of Honorable Prime Minister of India for my excellent academic performance in the B.Sc. examination.
- Third prize in the Minaxi Lalit Science Award Test in M. Sc. In the year 2003.
- First prize in the Minaxi Lalit Science Award Test in B. Sc. In the year 2004.

#### Five Keywords Reflecting Areas of Scholastic/Research Activities:

Harmonic analysis, Banach algebras, Operator Theory

#### Five Recent Publications:

1. *The multiplier algebra of a Beurling algebra*, Bull. Aust. Math. Soc. 90 (2014), 113–120 (with S J Bhatt and H V Dedania).
2. *The  $*$ -semisimplicity of the  $l^1$ -algebra on an abelian  $*$ -semigroup*, Bull. Aust. Math. Soc., 88(2013) 492—498 (with S. J. Bhatt and H. V. Dedania).
3. *Arens regularity and Amenability of Lau product of Banach algebras defined by a Banach algebra morphism*, Bull. Aust. Math. Soc., 87(2013) 195 – 206 (with S. J. Bhatt).

# Curriculum Vitae

(As on 14/06/2016)

Name: Prakashkumar Arvindbhai Dabhi

Date of Birth: 24<sup>th</sup> December 1978

Sex: Male

Marital Status: Married

Present Position: Assistant Professor (Senior Scale), Department of Mathematics, Sardar Patel University

Phone: 9558808167

Email: [lightatinfinite@gmail.com](mailto:lightatinfinite@gmail.com)

Languages known: Gujarati, Hindi, English

## Educational Qualification:

No	Degree	University/Board	Year of Passing	Percentage	Remark
1	S. S. C.	GSEB	1994	67.29	
2	H. S. C.	GSEB	1996	68.76	Science stream
3	B.Sc. (Mathematics)	Gujarat University	2002	88.10	Gold Medalist
4	M.Sc. (Mathematics)	Gujarat University	2004	93.80	Gold Medalist
5	Ph.D. (Mathematics)	Sardar Patel University	2010	—	—

## Research Papers:

1. *On the uniqueness of uniform norms and  $C^*$ -norms*, Studia Mathematica, (191)(3) (2009), 263-270 (with H. V. Dedania)
2. *Beurling algebra analogues of theorems of Wiener-Levy-Zelazko and Zelazko*, Studia Mathematica, 195(3)(2009) 219-225. (with S. J. Bhatt and H. V. Dedania)
3. *Multipliers of weighted semigroups and associated Beurling Banach algebras*, Proc. Indian Acad. Sci. (Math. Sci.), (121)(4)(2011) 417–433. (with S. J. Bhatt and H. V. Dedania).

4. *Absolutely differentiable functions and functions of bounded differential variation*, The Math. Student, (79)(1- 4)(2010) (with S. J. Bhatt and Krunal Kachhia).
5. *Arens regularity and Amenability of Lau product of Banach algebras defined by a Banach algebra morphism*, Bulletin of the Australian Mathematical Society, 87(2013) 195 – 206 (with S. J. Bhatt).
6. *The \*- semisimplicity of the  $\ell^1$ -algebra on an abelian \*-semigroup*, Bulletin of the Australian Mathematical Society, 88(2013) 492—498 (with S. J. Bhatt and H. V. Dedania).
7. *The multiplier algebra of a Beurling algebra*, Bulletin of the Australian Mathematical Society, 90 (2014), 113–120 (with S J Bhatt and H V Dedania).
8. *Some notes on amenability and weak amenability of Lau product of Banach algebras defined by a Banach algebra morphism* (with A. Jabbari and K. Haghnejad Azar), Acta Math. Sinica, 31(9), 1461–1474.
9. *The BSE-property and perturbed Cartesian product in commutative Banach algebras*, Acta Math. Hungarica, 149(1)(2016), 58 – 66.
10. *Basic algebra on the perturbed product of linear associative algebras*, Mathematics Today, Vol 30(June –Dec 2014), 40 – 45, (with Savan Patel)
11. *Bochner-Schoenberg-Eberlein property for perturbed product of Banach modules*, Mathematics Today, Vol 30(June –Dec 2014), 46 – 53, (with Rakshit Upadhyay)

#### **Research Papers accepted:**

12. *Spectral Properties and stability of perturbed Cartesian product*, to appear in Proc. Indian Acad. Sci. (Math. Sci.) (with Savan K. Patel)
13. *Isometric Multipliers of a vector valued Beurling algebra on a discrete semigroup*, to appear in Proc. Indian Acad. Sci. (Math. Sci.) (with Manish Kumar Pandey).
14. *On an intrinsic characterization of self-adjoint  $C^*$ -algebras* (with S. J. Bhatt), to appear in Colloquium Mathematicum.

#### **Research Papers Communicated:**

1. *Perturbation of direct sums of Hilbert  $C^*$ - modules and of vector bundles induced by morphisms* (with S. J. Bhatt)

#### **M. Sc. Research Project guided:**

1. Some Curious Topologies on the Real Line
2. Banach Algebras Associated with Commutative Banach Algebras
3. Inverse Semigroups and  $*$  - semigroups

#### **M. Phil. Students Guided:**

1. Banach Algebras satisfying the Bochner – Schoenberg – Eberlein property (Rakshit Upadhyay)
  2. Absolute convergence of the multiple Fourier series (Rajesh Chauhan)
- One student is pursuing her M.Phil. under my supervision.

**Ph. D. students Guided:**

Currently 3 students are pursuing their Ph. D. under my guidance.

**Books:**

1. Uniqueness properties in Banach algebras and Beurling algebras, GRIN Publishing House, ISBN: 978-3-668-01219-6
2. BCA Mathematics I, Ria Publishing House, ISBN: 978-93-84339-04-3.
3. Lecture notes on Differential Geometry, GRIN Publishing House, ISBN: 978-3-668-01573-9.
4. The *University Granth Nirman Board (Government of Gujarat)* is going to publish a book on *Problem Solving in Mathematics for National Eligibility Test* of problems in Mathematics compiled by me and Dr. D. J. Karia. **It is under proof reading.**

**Work/Research Experience:**

No	Institute	Position	Period	Reason of Leaving
1	Nirma University	Lecturer	27/09/04 to 11/04/05	To Join Ph.D.
2	Sardar Patel University	Junior Research Fellow (CSIR – JRF)	12/04/05 to 25/06/2006	Selected as an Assistant Professor in the Department of Mathematics, Sardar Patel University
3	Sardar Patel University	Assistant Professor	26/06/06 to till date	--

**Prizes/Honor won:**

1. Won Gold medal in B.Sc. by standing University first (subject wise as well as overall) in Gujarat University.
2. Won Gold medal in M.Sc. by standing University first (subject wise as well as overall) in Gujarat University.
3. First prize in the Prof. A. R. Rao Mathematics Competition in B. Sc. In the year 2002.
4. Second prize in the Minaxi Lalit Science Award Test in B. Sc. In the year 2002.
5. I was honored to witness the Republic Day Parade, 2003, from Prime Ministers' Box at Rajpath, New Delhi, as a guest of Honorable Prime Minister of India for my excellent academic performance in the B.Sc. examination.
6. Third prize in the Minaxi Lalit Science Award Test in M. Sc. In the year 2003.
7. First prize in the Minaxi Lalit Science Award Test in B. Sc. In the year 2004.
8. I cleared CSIR – NET – JRF and SLET examination in first trial.

9. I stood in top 20% of CSIR NET examination in the year 2005 and was called for the interview for Shyama Prasad Mukerji Fellowship (SPMF). Since I was appointed as an Assistant Professor at the Department of Mathematics, Sardar Patel University, I did not appear in the interview.

**National Level Competitive Exams Cleared:**

No	Examination	Year	Organizing body
1	CSIR – NET- JRF	2004	UGC – CSIR
2	GSLET	2004	The M. S. University of Baroda
3	CSIR – JRF – NET	2005	UGC – CSIR

**Conferences/Seminars/Summer schools/Workshops attended:**

No	Programme	State Level/ National Level/ International Level	Organized by	Duration		No. of Days
				From	To	
1	Seminars in Mathematics	Local	Department of Mathematics, Gujarat University	23/12/2000, 30/12/2000, 06/01/2001, 13/01/2001, 20/01/2001		05
2	MTTS level O	National	IIT Bombay	21/05/2001	16/06/2001	28
3	MTTS level I	National(MTTS)	IIT Bombay	20/05/2002	15/06/2002	28
4	MTTS level II	National(MTTS)	RIE, Mysore	26/05/2003	14/06/2003	21
5	VSRP	National	TIFR, Bombay	15/06/2003	14/07/2003	30
6	Instructional Workshop on Harmonic Analysis on Symmetric Spaces	National	IIT Kanpur and ISI Bangalore	21/06/2004	09/07/2004	19
7	Instructional Workshop and International Conference on Recent Advances in Operator Theory and Operator Algebras III	International	ISI Bangalore	12/12/2005	22/12/2005	11
8	Conference on Functional Analysis and Its Applications	National	Department of Mathematics, Sardar Patel University	14/03/2005	16/03/2005	03
9	Workshop on Fourier and Harmonic Analysis	National	Department of Mathematics,	24/03/07	26/03/07	03

			Sardar Patel University			
10	Orientation Programme	National	Academic Staff College, Saurashtra University	19/11/07	16/12/07	28
11	Annual conference of Gujarat Ganit	State Level	Gujarat Ganit Mandal	04/11/07	06/11/07	03
12	IIIrd Sci Meet 2008	Local	Department of Mathematics, Sardar Patel University	17/02/2008	17/02/2008	01
13	Mathematics Meet 2008	National	Department of Mathematics, Gujarat University	28/03/2008	29/03/2008	02
14	Research seminar on Mathematics and Applications	National	Department of Mathematics, Sardar Patel University	10/01/09	12/01/09	03
15	National Seminar on Analysis, Differential Equations and Applications	National	Department of Mathematics, The M S University of Baroda	30/01/2009	31/01/2009	02
16	Refresher Course	National	Academic Staff College, Sardar Patel University	15/11/2010	05/12/2010	21
17	Vth Science Meet 2010	Local	Department of Mathematics, Sardar Patel University	14/02/2010	14/02/2010	01
18	National Symposium in Mathematics for Young Researchers	National	Indian Institute of Technology, Gandhinagar	26/02/2010	28/02/2010	03
19	Analysis Geometry and Applications	National	Department of Mathematics, Sardar Patel University	04/03/2010	06/03/2010	03
20	International Congress of Mathematicians	International	University of Hyderabad,	19/08/2010	27/08/2010	09
21	Mathematics Meet 2011	National	Department of Mathematics, Gujarat University	03/02/2011	05/02/2011	03
22	ATM School on Harmonic Analysis	National	Indian Institute of Technology,	09/01/12	21/01/12	13

			Kanpur			
23	National Workshop on Research Methodology: A March Towards Creating Quality Through Research	National	Sardar Patel University	12/03/12	14/03/12	3
24	ATMW workshop and International conference on Recent Advances in Operator Theory and Operator Algebras	International	Indian Statistical Institute, Bangalore, India	31/12/12	11/01/13	12
25	Analysis, Geometry and Applications	National	Department of Mathematics, Sardar Patel University	07/03/13	08/03/13	2
26	Analysis, Geometry and Applications	National	Department of Mathematics, Sardar Patel University	17/02/14	18/02/14	2
27	ATMW workshop and International conference on Recent Advances in Operator Theory and Operator Algebras	International	Indian Statistical Institute, Bangalore, India	09/12/14	19/12/14	11

#### Research Paper Presented:

No	Title of the paper presented	Title of Conference/Seminar	Organized by	International/ National/ State
1	Some curious topologies on the real line	Annual conference of Gujarat Ganit Mandal	Gujarat Ganit Mandal	State
2	A curious property of commutative Banach Algebras	Annual conference of Gujarat Science Academy	Gujarat Science Academy	Regional
3	Uniqueness of uniform norms and $C^*$ - norms	Mathematics Meet – 2008	Department of Mathematics, Gujarat University (Sponsored by UGC and GUJCOST)	National
4	Beurling algebra analogues of theorems of Wiener – Zelazko and Levy – Zelazko	Research Seminar on Mathematics and Applications	Department of Mathematics, Sardar Patel University	National
5	Beurling algebra analogues of theorems of	National seminar on Analysis, Differential	Department of Mathematics, The M S	National



	Zelazko	Equations and Applications	University of Baroda	
6	UUNP and weighted Harmonic Analysis	National Symposium in Mathematics for young researchers	Indian Institute of Technology, Gandhinagar	National
7	Multipliers of weighted semigroups	International Congress of Mathematicians	University of Hyderabad	International
8	Multipliers of Weighted semigroups and associated Beurling Banach algebras	Mathematics Meet 2011	Department of Mathematics, Sardar Patel University	National
9	Multipliers of weighted semigroups	Analysis, Geometry and Applications	Department of Mathematics, Sardar Patel University	National
10	Aspects of Banach Algebras in Harmonic Analysis and Operator Theory	Recent Advanced in Operator Theory and Operator Algebras	Indian Statistical Institute, Bangalore	International
11	Perturbation of the Cartesian product and its stability	Analysis, Geometry and Applications	Department of Mathematics, Sardar Patel University	National

**Workshops/Seminars/Quiz Organized: (First five with Dr. D. J. Karia)**

No .	Title	Place	Date/ Period	Funding	Remark
1	Fourth Workshop On Problem Solving In Mathematics	Department of Mathematics, Sardar Patel University	28/01/10 to 03/02/10	UGC – SAP – DRS of the Dept of Maths, SPU	For students in Gujarat preparing for NET, SET, NBHM exams
2	Third Workshop On Problem Solving In Mathematics	Department of Mathematics, Sardar Patel University	24/01/09 to 29/01/09	UGC – SAP – DRS of the Dept of Maths, SPU	For students in Gujarat preparing for NET, SET, NBHM exams
3	Workshop On Problem Solving In Mathematical Analysis and Related Areas	Department of Mathematics, Sardar Patel University	21/02/08 to 26/02/08	UGC – SAP – DRS of the Dept of Maths, SPU	For students in Gujarat preparing for NET, SET, NBHM exams
4	Science Talent Hunt	Department of Mathematics, Sardar Patel University	February 2008	CSC VV Nagar	For students of the University preparing for NET, SET exams
5	Science Talent Hunt	Department of Mathematics, Sardar Patel University	March 2009	CSC VV Nagar	For students of the University preparing for NET, SET exams
6	National Seminar on	Department of	07/03/13	UGC – SAP	National Research

	Analysis, Geometry and Applications	Mathematics, Sardar Patel University	to 08/03/13	– DRS of the Dept of Maths, SPU	Seminar
7	National Seminar on Analysis, Geometry and Applications	Department of Mathematics, Sardar Patel University	17/02/14 to 18/02/14	UGC – SAP – DRS of the Dept of Maths, SPU	National Research Seminar

**Lectures/Sessions delivered:**

No	Programme	No of Lectures/ Sessions	Place	Year
1	Problem Solving In Mathematics	3	Department of Mathematics, Sardar Patel University	2007
2	Workshop On Problem Solving In Mathematical Analysis and Related Areas	3	Department of Mathematics, Sardar Patel University	2008
3	Third Workshop On Problem Solving In Mathematics	3	Department of Mathematics, Sardar Patel University	2009
4	Fourth Workshop On Problem Solving In Mathematics	3	Department of Mathematics, Sardar Patel University	2010
5	Workshop on Problem Solving in Mathematics	1	Department of Mathematics, Gujarat University	2009
6	Orientation Programme	22	Academic Staff College, Sardar Patel University	2011 to 2013
7	General Lecture to motivate the graduate students	1	N. V. Patel College of Science, Sardar Patel University	2009
8	One day workshop on Problem Solving in Mathematics	1	R. A. Bhavans' College of Science, Gujarat University	2011
9	National Workshop on Research Methodology: A March Towards Creating Quality Through Research	1	Sardar Patel University	2012
10	Refresher Course	1	Academic Staff College, Sardar Patel University	2013
11	Aspects of Banach Algebras in Harmonic Analysis and Operator Theory	1	ISI Bangalore	2013
12	National Seminar on Analysis, Geometry and Applications	1	Sardar Patel University	2014
13	International Conference on Operator Algebras and Operator Theory	1	ISI Bangalore	2015
14	National Workshop on Problem Solving Techniques in Mathematics (NWOPST – 2015)	1	The M. S. University of Baroda	2015
15	A CSIR – NET Crash Course	2	ARIBAS, New Vallabh	May 2015

			Vidyanagar	
16	A CSIR – NET Crash Course	2	ARIBAS, New Vallabh Vidyanagar	December 2015
17	2 <sup>nd</sup> Workshop on Problem Solving & Enrichment in Mathematics	1	St. Xavier's College, Ahmedabad	December 2015
18	UGC-sponsored NET Coaching Centre for SC/ST students	2	Sardar Patel University, Vallabh Vidyanagar	May 2016
19	A CSIR – NET Crash Course	2	ARIBAS, New Vallabh Vidyanagar	June 2016

#### Other Academic Activities:

1. I was an invited as an expert in Preparation of *Fundamental Glossary (English-Hindi-Gujarati) of Mathematics Terminology* by Commission for Scientific and Technical Terminology, MHRD during 27 – 31 January 2014 and 8 – 12 September 2014, 29 December 2014 to 2 January 2015, 12 – 15 May 2015, 29 February to 4 March 2016 and 27 – 31 May 2016.
2. I have been conducting Problem Solving Sessions during summer vacation for last five years. These sessions are for students in M.Sc. and M.Phil. to help them in understanding Mathematics better and to help them for preparing for National level and State Level Tests like CSIR – UGC – NET, NBHM, GATE, SET etc. (10 of them have cleared CSIR – NET)
3. I have conducted Weekly Departmental Research Seminars in the department. Faculty and Research students present their research work in these seminars. M.Sc. students and M.Phil. students are allowed to sit in the seminar.
4. I with Dr. D. J. Karia have been continuously developing Problem Sets for talented motivated students. These have been compiled and brought out in terms of Problem Sets. On the basis of these we have been conducting Annual Workshops on Problem Solving in Mathematics in our Department.
5. The Sardar Patel University have recently introduced Choice Based Credit System at all level from Graduate to M.Phil.. I have contributed in designing the syllabi of the M.Sc. courses of Mathematics in our University.
6. I am assisting in the administration of the NBHM Regional Library in Mathematics housed in our Department. This involves selection of books, purchase of books as well as services to the students of the department and out station persons visiting the Library throughout the year.
7. I am involved regularly in the conduct and assessment of the following tests conducted by the Department for National Board for Higher Mathematics every year.
  - a. M.A. and M.Sc. Scholarship Test.
  - b. Research Scholarship Screening Test.
8. I am assisting in administrative work of the Department like maintenance of Computer Laboratory, revision of syllabi, students' activities and organizations of SAP seminars. I am actively involved from last 7 years in the Special Assistant Programme (SAP) in the department having thrust area Analysis and Geometry

9. I have been assisting in the university examination whenever taken by our department.
10. In the extracurricular activities the Department, I accompany students in tours, in organization of Navaratri festival, Uttarayan festival and other activities in the Department.
11. I have been donating blood regularly and donated it all the times in the blood camp organized in our Department.
12. I have been conducting cricket tournament for the students of M.Sc. and M.Phil. of our Department.