

## **Praful A. Patel**

**Name:** Praful A. Patel

**Address:** Opp. Paras Bunglows,  
Nr. Akruti Park, 80 foot Road,  
ANAND – 388 001

**Designation:** Professor since 2002

**Professor & Head:** March 2012 to June 2016

**Head (In-charge):** July 2019 to July 2020

**Department:** Statistics

**Retirement Year:** July, 2022

**Contact Nos.** (O) 02692-226871/226881

M-9904494028

**E-mail:** (i) [pa\\_patel@spuvvn.edu](mailto:pa_patel@spuvvn.edu) (ii) [patelpraful\\_a@yahoo.co.in](mailto:patelpraful_a@yahoo.co.in)

**Academic Qualification:** M. Sc, M. Phil, Ph. D. (Sardar Patel University)

**Teaching Experience:** 36 years

**Areas of Interest:** Theory of Sample Surveys, Survey Sampling Inference, Statistical Inference,  
Multivariate Analysis, Financial Statistics

**Specialization:** Sampling Theory, Survey Sampling Inference

**Subject Taught:** Distribution Theory, Theory of Sample Surveys, Survey Sampling Inference,  
Theory of Estimation, Testing of hypotheses, Linear Models and Regression  
Analysis, Multivariate Analysis, Computer Oriented Statistical Methods,  
Econometrics. Design of Experiments

**Research Awards Received:** 03

**Awarded 'Hari Ohm Ashram Prerit Bhaikaka Inter-University Smarak Trust' awards for the best paper in the subject Statistics three times.**

Sr. No.	Title of the paper	For the year
1	Uniformly admissible estimator for the finite population variance	1995-96
2	Asymptotic Properties of a generalized regression type predict of a finite population variance in probability sampling	1997-98
3	Design-based Horvitz-Thompson variance estimation: $\pi$ -weighted ratio type estimator	2006-07

**Number of Ph.D Guided: 05**

Sr. No.	Student Name	Registration No.	Date of Registration	Title of Thesis	Completed
1	Raju Digamber Chaudhari	D-E/11/3637	29/09/1998	Variance estimation of Horvitz-Thompson and GREG estimator of the finite populations	2003
2	Rina M. Shah	D-E/11/964 Re-registration D-E/10/4650	18/05/2006	Estimation of non-linear parameters and variance estimation of non-linear estimators based upon stratified sample from finite population.	2012
3	Jigna Suryakant Patel	D-E/11/8698 Re-registration D-E/10/4823	05/03/2007 30/10/2007	Estimation of variance of various estimates of the finite population mean for the Midzuno-Sen sampling scheme.	2010
4	Shraddha C. Bhatt	D/E/11/3807	14-09-2011	On estimation of finite population parameter under PPS sampling	2017
5	Fagun H. Shah	D/E/--/1459	04/10/2014	Some Imporved Ratio And Rergression Type estimators In Two-Phase Sampling In Presence Of Two Auxiliary Variables	2019

### **Published Articles**

1. Shah, D. N. & Patel, P. A. (1994). Optimum estimation for a finite population variance under certain superpopulation models, Journal of the Indian Statistics Association, 32(1), 21-28.

2. Shah, D. N. & Patel, P. A. (1994-95). Uniformly minimum variance unbiased estimation for finite population variance, *Gujarat Statistics Review*, 21 & 22, 17-24.
3. Shah, D. N. & Patel, P. A. (1994). Estimation of finite population variance, *Prajna (Journal of Sardar Patel University)* 4, 93-100.
4. Shah, D. N. & Patel, P. A. (1995). Uniformly admissible estimator for the finite population variance, *Journal of the Indian Statistical Association*, 33(1), 31-36.
5. Shah, S. M., Shah, D. N. & Patel, P. A. (1995). Improving Liu's estimator of a finite population variance, *Prajna (Journal of Sardar Patel University)*, 5, 89-94.
6. Shah, D. N. & Patel, P. A. (1996). Asymptotic Properties of a generalized regression type predict of a finite population variance in probability sampling, *Canadian Journal of Statistics*, vol. 24(3), 373-384.
7. Patel, P. A.(1998). Admissible Bayes predictor of finite population total, *Gujarat Statistical Review*, 25(1-2), 9-16.
8. Patel, P. A & Shah, D. N. (1999). Model-based estimation for a finite population variance, *Journal of Indian Statistical Association*, 37(1), 27-35, 1999.
9. Patel, P. A & Chaudhari, R.D. (2003). Estimation of a finite population variance in the presence of auxiliary information, *Statistics in Transition*, 6(4), 533-542.
10. Patel, P. A & Chaudhari, R.D. (2005). On Estimating Horvitz-Thompson Variance from Survey Data using Auxiliary Information, *Gujarat Statistics Review*, Vol.31(2004) & Vol.32(2005) Nos.1-2, 63-74.
11. Patel, P. A & Chaudhari, R.D. Horvitz-Thompson variance estimation when auxiliary information is available, *J. Agri. Soc. Stat*, Vol.59(3), 199 – 208.
12. Patel, P. A & Chaudhari, R.D. (2006). Design-based Horvitz-Thompson variance estimation:  $\pi$ -weighted ratio type estimator, *Statistics in Transition*, 7(6), 1277-1293.
13. Patel, P. A & Chaudhari, R.D. (2008). Model -based Variance estimation under unequal probability sampling, *Metrika* 67, 171-187.
14. Jigna Patel & P. A. Patel (2008). A Monte Carlo comparison of some estimators of finite population Total under Midzuno sampling, *Journal of the Indian Statistical Association*, 46, 2, 141-153.

15. P. A. Patel & Rina Shah, (2009). A Monte Carlo comparison of some suggested estimators of coefficient of variation in finite population, *Journal of Statistics Sciences*, 1 (2), 137-148.
16. Patel, P. A & Chaudhari, R.D. (2009-10). Estimation of variance of the regression estimator, *GSR*, Vol. 36, 37, 3 – 18.
17. P. A. Patel & Jigna S. Patel (2010) A Monte Carlo comparison of some variance estimators of Horvitz- Thompson estimator, *J. Statistical Computing and Simulation*, 80, 5, 489-502.
18. Jigna S. Patel and P. A. Patel, (2010). Comparison of some variance estimators of the ratio estimator in presence of two auxiliary variables, *Interstat*.
19. Jigna S. Patel and P. A. Patel, (2010). On Non-negative and Improved variance estimation for ratio estimator under Midzuno-Sen sampling scheme, *Statistics in Transition-new series*, 10(3), 371-385.
20. Patel P. A. & Shah Rina, (2011). A system of estimators for estimating distribution function of a finite population under unequal probability sampling, “*Journal of Statistics sciences*”, 3 (1), 79 – 88.
21. Patel, P. A & Chaudhari, R.D. (2011). On variance estimation for the GREG Estimator, *PRAÑÄ –Journal of Pure and Applied Sciences*, 19, 97-99.
22. Patel P. A. & Patel Jigna, (2012). Model-Assisted Nonnegative Variance Estimator of the Ratio Estimator under the Midzuno-Sen Sampling Scheme, *Pakistan Journal of Statistics and Operation Research Pak.j.stat.oper.res. Vol. VIII (1)*, 55-64.
23. Patel P. A. & Shah Rina, (2012). Generalized ratio-type estimator of the coefficient of variation of a finite population, *Int Jr. of Mathematics Sciences & Applications* Vol. 2, No. 3,
24. Patel P. A. & Shah Rina, (2012). Estimation of the finite population coefficient of variation in presence of two auxiliary variables, “*Journal of Statistics sciences*”, 4 (1), 55 –63.
25. Shah, Rina and Patel, P. A. (2016). Estimation of general non-linear parameter using auxiliary information at the estimation stage, *Research Matrix*, 16 (7), 84-94 (ISSN 2321 7073)
26. Patel P. A. and Shraddha Bhatt (2016). A Model-based Estimation of Finite population Variance under PPS Sampling, *Imperial journal of interdisciplinary (IJIR)*, Vol. 1-2, Issue-4, 2016, 1078-84 (ISSN-2454-1362)

27. Patel P. A. and Shraddha Bhatt (2016). Admissible Estimation of a Finite Population Total under PPS Sampling, Research Journal of Mathematical and Statistical Sciences, Vol. 4 (8), 10-15 (E-ISSN 2320-6047)
28. Patel P. A. and Shraddha Bhatt (2016). Estimation of finite population total under PPS sampling in presence of extra auxiliary information. International Journal of Statistics and Analysis, (ISSN 2248-9959) Vol. 6 (1), 9-16.
29. Patel P. A. and Shraddha Bhatt (2017). On efficiency of Midzuno-Sen strategy under two-phase sampling, International Journal of Statistics and Analysis, Vol. 7 (1), 19-26.
30. Patel P. A. (2017). Model-assisted Variance Estimator for the GREG Estimator, Journal of Mathematics and Statistical Science, Vol. 4 (3), 99 - 107 (ISSN 2411-2518, USA)
31. Patel, P. A. and Shah, F. H. (2018). Regression-type Estimators Based on Two Auxiliary Variables of a Finite Population Mean in Two-phase Sampling. International Journal of Scientific Research in Mathematical and Statistical Sciences, 5(5), 144-152.
32. Patel, P. A. and Shah, F. H. (2018). Two-phase Ratio-type Estimator of a Finite Population Mean. International Journal of Scientific Research in Mathematical and Statistical Sciences, 5(5), 199-203.
33. Patel, P. A. and Shah, F. H. (2018). A class of estimators of a general parameter of a finite population with auxiliary information on two variables, International Journal of Statistics and Analysis, Vol 8(1), 1-7.
34. Patel P. A. and Shah F.H. (2019). A New Class of Ratio-type Estimators of the Finite Population Mean using Two Auxiliary Variables in Two Phase Sampling, Journal of Advanced Research in Applied Mathematics and Statistics; 4(1):8-12.
35. Patel P. A. and Shah F.H. (2019). A System of Estimators of the Population Mean under Two-Phase Sampling in Presence of Two Auxiliary Variables. International Journal of Statistics and Mathematics, 6(2): 130-136, May
36. Patel P. A. and Shah F.H. (2019). A Class of Ratio-type Estimators under Two-Phase Sampling in the Presence of Two Auxiliary Variables, Journal of Statistical Research, 53 (1), 79-91, May
37. Shah Rina and Patel P. A (2020). Composite-Type Estimator of the Coefficient of Variation under SRSWOR, International Journal of Scientific Research in Mathematical and Statistical Sciences, 7(1), 57-63. Feb.