

**Name : Dr. Surinder Kumar**  
**Designation : Professor**  
**Department : Statistics**  
**School of Physical and Decision Sciences**



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### Education Qualification

	Organization	Year of award
<b>Undergraduate</b>	<b>Jammu University, Jammu</b>	<b>1993</b>
<b>Post-graduation</b>	<b>Deptt. of Statistics, Jammu University, Jammu</b>	<b>1995</b>
<b>Ph.D.</b>	<b>C.C.S University, Meerut</b>	<b>1999</b>
<b>Post-Doctoral Training</b>	<b>NA</b>	<b>NA</b>

### Professional Experience (In Years)

**Teaching Experience: Twenty One years**  
**Research Experience: Twenty Five years**

### Areas of Research (Maximum Five Bullet Points)

- Reliability Analysis
- Sequential testing
- Bayesian Analysis

### Research/Consultancy Grants

Title of Projects	Funding Agency	Duration (Specific Dates)	Total grant	Role (PI/CO-PI)
NIL				

### Publications

S.N	Authors and title of the paper	Year of Publication
1	Ajit Chaturvedi, Ajay Kumar and <b>Surinder Kumar</b> (1998): Robustness of the sequential procedures for a family of life-testing models. Metron 56, 117-137. (Italy),	1998

- 2 Ajit Chaturvedi and **Surinder Kumar** (1998): Further remarks on estimating the reliability function of exponential distribution under type I and type II censoring. *Rebrape*, 13, 29-39. (Brazil) 1998
- 3 Ajit Chaturvedi, Ajay Kumar and **Surinder Kumar** (1999): Sequential testing procedures for a class of distributions representing various life – testing models. *Statistical Papers* 41, 65-84. (Germany) 1999
- 4 Ajit Chaturvedi, **Surinder Kumar** and Sanjeev Kumar (2001): Multi-stage estimation procedures for the ‘range’ of two-parameter uniform distribution. *Metron*, 59,179-186. (Italy) 2001
- 5 M. K. Pande and **Surinder Kumar** (2006): Estimation of population Mean using supplementary information. *Proc. Nat. Acad. Sci. India*, 76(a), III, 2006, pp 243-246. 2006
- 6 **Surinder Kumar**, M. K. Pande, and Sparsh Bhatt (2006): A study of the robustness of the Sequential test of an Inverse Gaussian distribution with known coefficient of variation. *Int. Jour. Agri. Stat. Sci*, Vol. 3 No 2, pp 413-420. 2006
- 7 Singh, N. Okendro, **Surinder Kumar** and P.C. Mahanta (2007) : Multivariate Statistical Analysis of Water Quality Data in Narmada River. *Journal of Ecophysiology and Occupational Health*,7( 1 & 2): 45 – 53 2007
- 8 Singh, N. Okendro, **Surinder Kumar** and P.C. Mahanta, M. K. Pande and N. Gopimohon Singh (2007): Evaluation of Water Quality Data from Gaula River by Factor Analysis. *Journal of Ecophysiology and Occupational Health*, 7( 3 & 4): 165 – 169. 2007
- 9 **Surinder Kumar**, and Naresh Chandra(2007): Sequential testing procedures for the parameter of a family of lifetime distributions: *Indian J. of Applied Statistics*, 11, 30-33. 2007
- 10 Singh, N. Okendro, **Surinder Kumar** and P.C. Mahanta, and M.K. Pande (2008): Analysis of the Quality of Jhelum River Waters by Multivariate Techniques. *Icfai University Journal of Soil and Water Sciences*, 1(2): 33-43. 2008
- 11 Singh, N. Okendro, Shayam Sunder, **Surinder Kumar** and M.K.Pande (2009): Realistic Modeling on Length – Weight Relationship of *Schizothoraichthys curvifrons* Heckel from River Jhelum, Kashmir. *Icfai University Journal of Soil and Water Sciences*, 3(2): 24-30. 2009
- 12 Singh, N. Okendro, Md. Wasi Alam, A. K. Paul and **Surinder Kumar** (2009): Length – Weight Relationship and Growth Pattern of *Tor Putitora* (Hamilton) under Monoculture and Polyculture System : A Case Study. *Journal of the Indian Society of Agricultural Statistics*, 63(1): 85-89. 2009

- 13 Singh, N. Okendro, **Surinder Kumar** , P.C. Mahanta, and N. Gopimohon Singh (2009): A Modified Logistic Model to Incorporate Cyclical Fluctuations in Growth Rate of *Tor Putitora* (Hamilton). *Asian Fishery Sciences*, 22, pp 1113-1136. 2009
- 14 Singh, N. Okendro, **Surinder Kumar** and P.C. Mahanta, and M.K.Pande (2009): Estimation of maximum size of *Schizothorax richardsonii* Gray in Different Aquatic Environments by Statistical Approach. *Proc. Nat. Academy of Sciences. India, Seet. B, Vol 79pt. IV. (Biological Sciences)*. 2009
- 15 **Surinder Kumar** and Naresh Chandra: (2009): A note on Sequential testing of the mean of an inverse Gaussian distribution with known coefficient of variation. *Journal of India Statistical Association*, Pune. Vol. 47 No. 2, 151-160. 2009
- 16 Singh, N. Okendro, **Surinder Kumar**, P. C. Mahanta, and N. Gopimohon Singh (2009): Evaluation of pollution sources of Narmada river by factor Analysis: *Fishing Chimes*, Vol. 29 No. 6, 2009
- 17 Singh, N. Okendro, **Surinder Kumar**, N. Gopimohon Singh and Amrit Kumar Paul (Accepted). : Fitting of Fox Model With Autoregressive of Order One Using Expected Value Parameters. *Indian Journal of Animal Sciences*. 2010
- 18 **Surinder Kumar** and Naresh Chandra (2011): Sequential test for the parameter of generalized maxwell distribution. ISSN: 0974-3308, *International journal of system and information technology-SRIMCA*, Vol. 4, No. 1. 2011
- 19 Singh,N. Okendro, A.K. Paul, **Surinder Kumar**, Wasi Alam, N. Gopimohan Singh, K.N. singh and Pal Singh: Fitting of partial reparameterized growth model to oil palm yield data. *Int. J.Agricult. Stat. Sci.*, Vol. 9 Supplement 1, pp 55-62. 2013
- 20 N Okendro singh, **Surinder kumar**, N Gopimohan Singh, A K Paul, K N Singh and Paul, Singh (2013): Fitting of fox model with autoregressive of order one using expected value parameters. *Indian Journal of animal sciences*, 83(2):85-00. 2013
- 21 **Surinder Kumar** and Mukesh Kumar: A study of the Sequential test for the parameter of pareto distribution: *International Journal of Advance Research*, IJOR .org, Vol 1, Issue 9, 2013 2013
- 22 Jahangir Khan and **Surinder Kumar** : "On strength Reliability for Lindley Distributed stress". *Asian Journal Of Current Engineering and Maths (Ajcem)* 2: 6 (2013) 359-361. 2013
- 23 Singh,N. Okendro, A.K. Paul, **Surinder Kumar**, Wasi Alam, N. Gopimohan Singh, K.N. singh and Pal Singh : Fitting of partial reparameterized logistic growth model to oil palm yield data. *International journal of agricultural and statistical sciences*, Vol. 9, Supplement 1, pp. 55-62, 2013. 2013

- 24 **Surinder Kumar**, Naresh Chandra and M.J.S. Khan: On the reliability estimation of burr type XII Distribution. *Journal of Safety & Reliability Society, Society (SaRS)*, Vol. 33 No. 2, Summer 2013- (U.K). 2014
- 25 Singh, N Okendro, N Gopimohon Singh, **Surinder kumar**, & Prem Kumar (2014): Pre-harvest forecasting of common carp yield from polyponds. *International Journal and Aquatic studies*; 1(3): 171-177. 2014
- 26 **Surinder Kumar** and Mayank Vaish (2014): On the estimation of  $R = P(Y > X)$  for a Class of Lifetime Distributions by Transformation Method. *Journal of Statistics Applications and Probability*. Vol. 3, 369-378. 2014
- 27 **Surinder Kumar** & Mukesh Kumar(2015): Study of the stress – strength reliability among the Parameters of Generalized Inverse Weibull distribution. *Int. J. Sci., Tech. & Management.*, Vol. 4, Special Issue No. 1 2015
- 28 **Surinder Kumar** and Mayank Vaish (2015): Robustness of the Sequential Test for the scale parameter of Nakagami Distribution. *Global Journals of Science Frontier Research: F Mathematics and Decision Sciences*. Vol. 15(8), 7-14. 2015
- 29 **Surinder Kumar** and Ajay Kumar (2016): A study of Strength-reliability for Shushila distributed stress. *International Research Journal of Mathematics, Engineering and IT*, Vol. 3, Issue 11. 2016
- 30 **Surinder Kumar** & Mukesh Kumar(2016): Robustness study for power function distribution. *J. Stat. Appl. & Prob.*, Vol. 5, No. 2, 1-6. 2016
- 31 **Surinder Kumar** & Mukesh Kumar(2016): Point and interval estimation of  $R = P(Y>X)$  for generalized Inverse Weibull Distribution by Transformation method. *J. Stat. Appl. Prob. Lett.* 3 No. 1, 1-6. 2016
- 32 M J S Khan, Akhter, Wahid, Surinder Kumar(2016): Characterisation of continuous probability distributions conditioned on a pair of record values. *ProbStat Forum*, Volume 09,, Pages 109–114ISSN 0974-3235 2016
- 33 Surinder Kumar, Mayank Vaish and M.J.S. Khan (2016): A study of the Stress- Strength reliability relationship among the parameters of a class of distributions. *Recent Advances in Applied Statistics and its Applications*. 49-53. 2016
- 34 Surinder Kumar, Mayank Vaish (2016): Estimation of the Stress-Strength reliability for Exponential distribution under Type I and Type II censoring by using the estimates of Reliability. *Recent Advances in Applied Statistics and its Applications*. 89-98. 2016
- 35 Surinder Kumar and Mayank Vaish (2017): A study of strength-reliability for Gompertz distributed stress. *International Journal of Statistics and Management Systems*. Vol. 12(3), 567-574 (Taylor and Francis). 2017

- 36 Surinder Kumar, Mayank Vaish and Poonam Miyan (2018): UMVUE of the Stress-Strength Reliability for a Class of Distributions by using the Estimates of Reliability. *Journal of Statistics and Management Systems*. Vol. 21(2), 217-223. 2018
- 37 **Surinder Kumar**, Vaidehi Singh and Mayank Vaish (2018): Robustness study of the sequential testing procedures for the New-Weibull Pareto distribution. *Journal of Statistics Applications and Probability*. Vol. 7(1), 59-73. 2018
- 38 **Surinder Kumar**, Vaidehi Singh and Prem Lata Gautam : Sequential testing procedure and their robustness study for erlang distribution. *International Research Journal of Natural and Applied Sciences* ISSN: (2349-4077) Volume 5, Issue 3, March 2018 2018
- 39 Vaidehi Singh and **Surinder Kumar** (2018): Robustness Study of the SPRT for the Generalized Inverse Weibull Distribution when the underlying parameters are misspecified. *Pramana Research Journal* (ISSN NO: 2249-2976) Volume 8 Issue 11 (November 2018) 2018
- 40 MJS Khan, Surinder Kumar, Ajay Kumar (2018): Relations for Moments of Kumaraswami Power Function Distribution Based on Ordered Random Variables and a Characterization. *International Journal of Advanced Research in Science, Engineering and Technology*, Volume 5, Issue 2, 5250-5257 2018
- 41 Surinder and Mradula (2019): A Study of the Sequential Test for the Parameter of the Odd Generalized Exponential Gompertz Distribution. *J. Stat. Appl. Pro. Lett.* 6, No. 1, 21-28 2019
- 42 Surinder Kumar and Ankit (2019): Estimation of Stress-Strength Reliability for Inverse Rayleigh Distribution and Power Function Distribution by Transformation Method. *Pramana Research Journal* 2019
- 43 Prem Lata Gautam, Vaidehi Singh, **Surinder Kumar** (2019): Stress-Strength Relationship Between Exponentiated Weibull Distribution and Power Function Distribution. *International Journal of Research and Analytical Reviews (IJRAR)* 2019 IJAR February 2019, Volume 6, Issue 1 www.ijrar.org (E-ISSN 2348-1269, P- ISSN 2349-5138) 2019
- 44 Surinder Kumar, Vaidehi Singh and Prem Lata Gautam (2019): Stress-strength relationship between exponentiated weibull distribution and power function distribution. *International journal of research and analytical reviews*. 6, No. 1 201-204 2019
- 45 Surinder Kumar, Vaidehi Singh and Prem Lata Gautam (2020): Study of disaster probability when strength follows Power Function distribution and stress follows Odd Generalised Exponential Gompertz distribution. *Journal of Statistics application and probability*. 9, No. 3, 1-10. 2020
- 46 Surinder Kumar, Vaidehi Singh and Prem Lata Gautam (2020): Bayesian estimation for the scale parameter of a family of lifetime distribution under different priors. *Thailand Statistician*. (Accepted) 2020
- 47 Surinder Kumar, Vaidehi Singh and Prem Lata Gautam (2020): Inference on Positive Exponential Family of Distributive (PEFD) 2020

- through Transformation Method. *Journal of Reliability and Statistical Studies*. 13, No. 2-4, 363-384.
- 48 Surinder Kumar, Vaidehi Singh and Prem Lata Gautam (2020): 2020  
Sequential Analysis and Robustness Study for the parameters of  
Positive Exponential Family of Distributions with known coefficient of  
variation. *Thailand Statistician*. (Accepted ).
- 49 Aditi Chaturvedi and Surinder Kumar (2021). Estimation and Testing 2020  
Procedures for the Reliability Characteristics of Chen Distribution Based on  
Type II Censoring and the Sampling Scheme of Bartholomew. *Statistics,  
Optimization and Information Computing*, Vol 9(1), pp. 99-122. DOI:  
<https://doi.org/10.19139/soic-2310-5070-1032>
- 50 Surinder Kumar and Aditi Chaturvedi (2020). On a Generalization of the 2020  
Positive Exponential Family of Distributions and the Estimation of Reliability  
Characteristics. *STATISTICA*, Vol 80(1), pp. 57-77. DOI:  
<https://doi.org/10.6092/issn.1973-2201/8638>
- 51 Aditi Chaturvedi and Surinder Kumar (2020). Estimation Procedures for the 2020  
Reliability Functions of Kumaraswamy-G Distributions Based on Type II  
Censoring and the Sampling Scheme of Bartholomew. *Statistics in  
Transition-New Series*. (Accepted)
- 52 Surinder Kumar and Ankit (2021): An extension of lifetime distributions 2021  
and Estimation of reliability function using the Transformation  
Method. *Int. J.Agricult.Stat. Sci*. Vol. 16, No. 2, pp 625-631.

### Book Chapters

1. UMVUE of  $P=\Pr(X>Y)$  for one parameter exponential distribution under progressive type-II censoring, Surinder Kumar and Ajit Chaturvedi, Chapter 3, *Recent Advances in Applied Statistics and its Applications*, edited by Shashi Bhushan and Surinder Kumar, pg. 18, ISBN No. 978-3-659-95755-0.
2. A study of the stress-strength reliability relationship among the parameters of a class of distributions, Surinder Kumar, Mayank Vaish and M.J.S. Khan, Chapter 7, *Recent Advances in Applied Statistics and its Applications*, edited by Shashi Bhushan and Surinder Kumar, pg. 49, ISBN No. 978-3-659-95755-0.
3. Estimation of the stress-strength reliability for exponential distribution under type I and type II censoring by using the estimates of reliability, Surinder Kumar and Mayank Vaish, Chapter 11, *Recent Advances in Applied Statistics and its Applications*, edited by Shashi Bhushan and Surinder Kumar, pg. 89, ISBN No. 978-3-659-95755-0.
4. A multivariate approach to the classification of water quality parameters, Surinder Kumar, Chapter 14, *Recent Advances in Applied Statistics and its Applications*, edited by Shashi Bhushan and Surinder Kumar, pg. 115, ISBN No. 978-3-659-95755-0.
5. Sequential for the parameter of a family of Lifetime distributions, Surinder Kumar and Naresh Chandra, Chapter 14, *Interface between statics mathematics and allied*

sciences, edited by Neeraj Tiwari and S. K. Joshi, pg. 123, ISBN No. 978-93-81361-115-5.

#### Books/Books edited

1. Recent Advances in Applied Statistics and its Applications, Lambert Academic Publishing, ISBN No. 978-3-659-95755-0

#### Popular Article

1. Singh, N. Okendro, **Surinder Kumar**, P. C. Mahanta and N. Gopimohon Singh (revised): Evaluation of Pollution Sources in Narmada River by Factor Analysis. *Fishing Chimes*.

#### Published Abstracts

1. Multivariate Statistical Analysis of Water Quality Data in Narmada River by N. Okendro Singh, **Surinder Kumar**, and P. C. Mahanta was presented in the **60<sup>th</sup> Annual Conference of ISAS**, held at IASRI, pusa Campus, New Delhi, during December 27 – 03, 2006.
2. Evaluation of pollution sources in Narmada River by Factor analysis by N. Okendro Singh, P. C. Mahanta, **Surinder Kumar**, and N. Gopimohon Singh was presented in the **7<sup>th</sup> Asian Fisheries Forum**, organized by Asian Fisheries Society and Asian Fisheries Society, Indian Branch during November 29-23, 2007 at Kochi, India.
3. N. Okendro Singh, **Surinder Kumar**, P. C. Mahanta, Debajit Sharma and N. Gopimohon Singh, 2008 : Realistic Modelling on Growth Pattern of *Tor putitora* (Hamilton) from Gobindsagar Reservoir in: Book of Abstracts – **8<sup>th</sup> Indian Fisheries Forum** (organized by Asian Fisheries Society, Indian Branch and Inland Fisheries Society on India), November 22-26, 2008, Kolkata, India, **O-FAB 22**.
4. N. Okendro Singh, **Surinder Kumar**, P. C. Mahanta, Debajit Sharma and N. Gopimohon Singh, 2008 : “Surplus Production Models with Autocorrelated Errors of order one” in: Book of Abstracts – **8<sup>th</sup> Indian Fisheries Forum** (organized by Asian Fisheries Society, Indian Branch and Inland Fisheries Society on India), November 22-26, 2008, Kolkata, India, ) **O-FAB 39**.

#### Patents

	Inventors	Title and Award/Application no.
<b>Awarded</b>	NIL	NIL
<b>Published</b>		
<b>Filed</b>		

## Research Supervision

	Completed	Ongoing
<b>PG/M.Phil</b>	18/05	02
<b>Ph.D</b>	12	03
<b>Post-Doctoral</b>	NIL	NIL

## Honors, Recognition and Awards

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## Membership of Professional Bodies

- ISPS life membership
- ICAR-IASRI life membership
- Indian Association for Reliability and Statistics (IARS).  
Life membership

## Seminar/Conference/Symposia /Workshops Organised

### Orientation / Refresher courses / Conferences and others

S. No.	Title	Year
1.	Attended a seminar on "Deliberations in Statistics and Statistics in Industry and Banking " held in the dept. of Statistics, University of Mumbai from Dec., 17-20, 1997 and presented a paper.	1997
2.	Orientation program from ASC, Lucknow University with first division from Feb. 01 – 28, 2005.	2005
3.	Attended one week workshop on "Bayesian techniques and its applications" sponsored by DST, Govt. of India from Oct. 07 – 17, 2008 held at Banasthali University	2008
4	Participated in the National Seminar on "Natural resource conservation in Uttarakhand: Status, Challenges and solutions", Sponsored by UCOST and organized by: UGC-Academic staff college, Kumaun University, 10-11, Oct., 2008	2008
5	Participated in the National Seminar on "Research Methods in Forestry and Climate change" Sponsored by ICERI Dehradun and UCOST Dehradun from Sep., 17-18, 2010 and presented a paper.	2010
6	Special summer school ASC, Kumaun University, Nainital 2008-09.	2009
7	Refresher course in Human Rights (MD) from ASC, Kumaun University, Nainital 2009-10.	2010
8	Attended Seventeen day's workshop on GIS from July 03 – 19, 2010 , held in the Geography dept. of DSB campus, Kumaun University, Nainital.	2010
9	Participated in the National workshop on Landslides and environmental degradation in hilly terrains from June 04-06, 2010 and presented a paper held at dept. of Geology. L. S. M. Govt. PG college Pithoragarh, Uttarakhand.	2010
10	Participated in the International Colloquium on History of Mathematical sciences and symposium on Non-linear analysis , organized by the deptt. of	2011



	Mathematics Kumaun University, SSJ campus, Almora and Indian society for history of Mathematics. and presented a paper.	
11	Participated in the 27 annual conference of the Mathematical society- BHU and presented a paper.	2011
12	Co-convener: 27th annual conference of the Mathematical society – BHU. Organized by DAMS BBAU, Lucknow, Nov., 26-27, 2011.	2011
13.	Co-convener: 27th annual conference of the Mathematical society – BHU. Organized by DAMS BBAU, Lucknow, Nov., 26-27, 2011.	2011
14.	Member of organizing committee of the International conference on radiation environment- assessment, measurement & its impact (RADENVIRON-2012).	2012
15.	Delivered 4 lectures in the workshop on Statistical Method and SPSS from 18-20 September, 2012, UGC-Academic staff college University, Lucknow.	2012
16.	Invited talk on “On estimating the reliability function .....approaches”, 19 <sup>th</sup> annual national conference on Statistics and Informatics in Agriculture and allied sciences, held at SKUAST – Jammu, March 06-08, 2017	2017
17.	Invited talk in One week workshop on emerging research trends in computer sciences, held at Department of Computer Science, BBAU, Lucknow, March 20-24, 2017.	2017
18.	Invited talk on “Estimating the reliability function ..... through various new approaches” in Applications of Scientific and Statistical Software in Research held at U.P. Rajarshi Tandon Open University, Allahabad, March 30-31, 2017.	2017
19	Resource person in the “Seven days national workshop on SPSS and research methodology ” organized by DRM, BBAU, Lucknow during 13-20 Dec. 2017	2017
20	Delivered an Invited talk in 4 <sup>th</sup> Science Congress (LUSCON-2017) on the title “On estimating the reliability-----using new techniques” during 3 <sup>rd</sup> - 4 <sup>th</sup> March 2017.	2017
21	Delivered two lectures on 15/07/2017 to the participants Refresher course in basic science HRDC, Dr. Babasaheb Ambedkar Marathwada university, Aurangabad (03.07.2017-22.07.2017).	2017
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### **Countries Visited**

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### **Invited Lectures/Talks/Chair/Co-Chair in Seminar/Conference/Symposia /Workshops**

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**Additional Information (If Any)**

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