



**Department of Statistics, Sambalpur University
Evaluative Report for the period 2010-11 to 2014-15**

1. **Name of the Department** : P.G. Department of Statistics
2. **Year of establishment** : 1976
3. **Is the Department part of a School/Faculty of the University?** : Faculty of the University.
4. **Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)** : P.G., M.Phil, Ph.D .
5. **Interdisciplinary programmes and departments involved** : Both P.G. & M.Phil level Mathematics, Statistics.
6. **Courses in collaboration with other universities, industries, foreign institutions, etc.** : Nil
7. **Details of programmes discontinued, if any, with reasons** : Nil
8. **Examination System: Annual/Semester/Trimester/Choice Based Credit System** :
Semester-cum-credit system
9. **Participation of the department in the courses offered by other departments:** Mathematics, Academic Staff College, Physics, Chemistry, Life Science and many Social Science departments.
10. **Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)**

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	2	1	2
Reader	3	1	1
Lecturer	4	2	1

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. Of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 5 years
Prof. S. K. Acharya	M.Sc.,M.Phil,Ph.D	Professor	Probability, Stochastic Process & Queuing Theory	32 Years	Ph.D-00 M.Phil-3
Prof S. Bagh	M.Sc., M.Phil, Ph.D	Professor	Probability, Stochastic Process & Data Analysis	36 Years	Ph.D-2 M.Phil-2
Dr. C. K. Tripathy	M.A,M.Phil,Ph.D	Reader	Probability & Operation Research	30 Years	Ph.D-2 M.Phil-5
Dr. S. K. Sahu	M.A.,M.Tech,Ph.D	Lecturer	Operation Research & Data Mining	17 Years	Ph.D-9 M.Phil-2

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors : Nil

13. Percentage of classes taken by temporary faculty – programme-wise information :

Nil

14. Programme-wise Student Teacher Ratio :

P.G. : 32:4

M.Phil : 5:4

Ph.D : 9:4

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual :

	Sanctioned	Filled	Actual
Demonstrator	1	1	1
Administrative Staff	2	2	2

16. Research thrust areas as recognized by major funding agencies :

- Probability,
- Stochastic Process ,
- Queuing Theory

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise. :

S.K. Acharya is working as a UGC project entitled “Estimating the change points in queuing models” Grant received-Rs-9,38,300/-.

18. Inter-institutional collaborative projects and associated grants received

- a) National collaboration: Nil
b) International collaboration: Nil

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received. : UGC, Grant received-Rs-9,38,300/-.**20. Research facility / centre with**

- State Recognition : Yes
- National Recognition : Yes
- International Recognition : Yes

21. Special research laboratories sponsored by / created by industry or corporate bodies : No**22. Publications:**

	2010	2011	2012	2013	2014	2015	Total
Prof S.Bagh							
International	--	2	6		--	1	9
National	--	1	1	1	--	--	3
Prof. S.K Acharya	--			--	--	--	
International	--	1	2	--	--	--	3
National	--	--		--	--	--	
Dr. C.K Tripathy	--	--		--	--	--	
International	7	3	4	--	--	1	15
National	2	--	--	--	--	--	2
Dr S.K Sahu	--	--	--	--	--	--	
International	4	1	12	4	--	3	24
National	1	--	2	--	--	--	3
Dr. R. Gartia	--	--		--	--	--	
International	--	2	2	--	--	2	6
National	--	1	3	1	--	2	7
Total	--	--			--		
International	11	9	26	4	--	7	57
National	3	2	6	2	--	2	15
	--	--	--	--	--		72

Books

- (a) Inventory Management (ISBN-978-3-659-60993-0) LAP LAMBERT Academic Germany (Year-2014)
- (b) Modeling on Inventory Control (ISBN-978-3-659-70577-9) LAP LAMBERT Academic Publishing, Germany (Year-2015)

23. Details of patents and income generated : Nil

24. Areas of consultancy and income generated : Nil

25. Faculty selected nationally / internationally to visit other laboratories/institutions /industries in India and abroad :

- i. Prof S.K. Acharya visited PESIS, Universidad Autonoma de Nuevoleon, MEXICO during May . 2011 to july. 2011, As Visiting Professor
- ii. Prof S.K. Acharya visited PESIS, Universidad Autonoma de Nuevoleon, MEXICO during Dec. 2014 to Feb. 2015 , As Visiting Professor

26. Faculty serving in

- a) National committees : NIL
- b) International committees : NIL
- c) Editorial Boards : 03
- d) any other (please specify) : 03

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs). : Nil

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects : 100%
- percentage of students doing projects in collaboration with other universities industry / institute : Nil

29. Awards / recognitions received at the national and international level by

- Faculty : Nil
- Doctoral / post doctoral fellows : Nil
- Students : Nil

30. Seminars/ Conferences/Workshops organized and the source of funding (national/ international) with details of outstanding participants, if any.

- 1. International Congress of Mathematicians Satellite International Conference on Probability and Statistics.(Sambalpur University,India, September 1-3,2010).Funding by –ICM,DST,UGC, 100+ Participants Including Foreign Delegates.

Outstanding participants of the Seminar

- R.Sainudiin, Univ. Of Canterbury, New Zealand
 - G. Trutnau, Seoul National University, South Korea
 - N.L.Hjort , Univ. Of Oslo, Norway
 - J.V.Despande, Univ of Pune,India
 - H.N.Dutta, Dibrugarg Univ
 - R.N.Misra, Patna Univ.
 - Suman Muzumdar, University of Connecticut, USA
 - S.K.Singh, Pt. R.S .Univ, Raipur
 - B.R. Victor Babu, Nagarjuna Univ, AP
 - M.N.Misra, IMA, Bhubaneswar
2. National Conference on Fourier Analysis and differential equations- 29th & 30th Dec 2012.

Outstanding Participants

- Prof. G.Das, Ex-Vice chancellor, Utkal University
 - Prof. P.C.Das, NISER, Bhubaneswar
 - Prof. N. Parhi, Retd. Prof., Berhampur University
 - Prof. M.N. Mishra, Retd. Prof. Sambalpur University
 - Prof. Arun. K. Pujari, Central Univ., Hyderabad
 - Prof. Amiya K. Pani, IIT, Bombay
 - Prof. Bhawani S. Panda, IIT, Delhi
 - Prof. B. R. Behera, ISI, Kolkata
 - Prof. Swagato Ku. Ray, ISI, Kolkata
3. 40th Annual Conference of Orissa Mathematical Society-29th & 30th Dec 2012.
31. **Code of ethics for research followed by the departments –As per Rule of the University.:**

Uses Turnitin anti-plagiarism software for checking theses prior to submission.

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
Year 2010-11					
MA/M.Sc	6	0	2	0%	100%
M.Phil	3	1	1	100%	100%
Ph.D	0				

Year 2011-12					
MA/M.Sc	1	1	0	100%	0%
M.Phil	1	0	1	0%	100%
Ph.D	1	0	1		
Year 2012-13					
MA/M.Sc	16	7	4	71.42%	75%
M.Phil	3	0	2	0%	100%
Ph.D	1	0	1		
Year 2013-14					
MA/M.Sc	35	7	8	85.71%	75%
M.Phil	6	2	1	100%	100%
Ph.D	8	2	4		
Year 2014-15					
MA/M.Sc	41	6	4	continuing	continuing
M.Phil	5	2	2	continuing	continuing
Ph.D	3	2	0		

33. Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
MA/M.Sc	75%	25%	Nil	Nil
M.Phil	80%	20%	Nil	Nil
Ph.D	100%	NIL	Nil	Nil

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.
: NIL

35. Student progression

Student progression		Percentage against enrolled
UG to PG		
PG to M.Phil.		60 %
PG to Ph.D.		60 %
Ph.D. to Post-Doctoral		
		Nil
Employed		
	Campus selection	Nil
	Other than campus recruitment	No Information
Entrepreneurs		
		No Information

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university:	75%
from other universities within the State	25%
from universities from other States from	NIL
universities outside the country	NIL

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the **assessment period** : Nil

38. Present details of departmental infrastructural facilities with regard to

- Library : Seminar Library with 886 Books .
- Internet facilities for staff and students : Available 100%
- Total number of class rooms : 2
- Class rooms with ICT facility : Nil
- Students' laboratories : 2
- Research laboratories : Nil

39. List of doctoral, post-doctoral students and Research Associates

- from the host institution/university : 7
- from other institutions/universities : 1
 - Satavisha Kabi Satapathy
 - Rahul Kumar Si
 - Abhilash Dash
 - Sarmistha Panda
 - Nirupoma Rout
 - Sibani Sahoo
 - P.K.Brahma
 - M.V.N.V.Prasad Rao

40. Number of post graduate students getting financial assistance from the university:
NIL

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. No

42. Does the department obtain feedback from

- a. **faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?** Yes, Improving open the lacking areas.
- b. **students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?** Yes, Improving on the lacking areas.
- c. **alumni and employers on the programmes offered and how does the department utilize the feedback?** Using feed back in a constructive way

43. List the distinguished alumni of the department (maximum 10)

- Prof S.K.Acharya, Dept of Statistics, Sambalpur University
- Prof S.Bagh, Dept of Statistics, Sambalpur University
- Dr C.K.Tripathy, Dept of Statistics, Sambalpur University
- Prof. Gopal Panda, NIT Rourkela
- Radheshyam Jena, Retired Reader, G.M. University, Odisha
- Monoj Guru, Reliance Industries, India
- Prof. Udaya Shankar Mishra, IIPS, Mumbai
- S.Mishra, Reader B.J.B. College, Bhubaneswar
- Pravati Sahoo, Reader Khallikote Univ, Berhampur, Odisha
- J.N.P.Biswal, University of North Carolina CharLotte, USA

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts. Regular Seminar

45. List the teaching methods adopted by the faculty for different programmes.

Oral, Interactive, Black Board, Internet & e-learning.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Interactive, Discussion and continuous evaluation.

47. Highlight the participation of students and faculty in extension activities.

Attend Conferences, Workshops and Social Welfare Programmes

48. Give details of “beyond syllabus scholarly activities” of the department.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. Not applicable.

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied. Research Publicity & books with by Faculty of the Department.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department:

Strength

- International guidance
- International collaboration
- International Examiner ship
- Organising Refresher courses regularly
- Updating Syllabus every two years.
- Good number of papers published
- Organising international, National, State level conferences.
- Successful guidance of good number of Ph.D Scholars
- The Faculties of the Department have visited foreign countries as visiting Professors, attending conferences etc.
- Our NET friendly syllabus is at par with the syllabus of other national institutes.

Weakness

- Shortage of faculty strength
- Insufficient infrastructure
- Shortage of Fund

Opportunity

- Our student have opportunity to join different administrative job , Teaching job and job in Industries and Business sector such as ISS, OSES, Statistical Investigator , Statistical Officer in different industries etc.

Challenges

- Given all the opportunity, we can do better in Research field.

52. Future plans of the department.

- A P.G. Diploma in Big data analysis course will be launched subject to appointment sufficient teaching staff , which will strengthen the teaching and research activities of the department.
- To start a Centre for Industrial Statistics and Research.
- To start a Certificate Course in Research Methodology for Researchers and Industry personnel.

Head of the Department

Annexure

PUBLICATIONS OF THE DEPARTMENT OF STATISTICS (2010-2015)

- Acharya S.K.. Estimating changes in traffic intensity for M/M/1/m queue. *Int. Math. Forum.* vol. 6, 3087-3092(2011) International ISSN:1312-7594(P)-7536(Online)
- Acharya S.K. Change point estimation of service rate in an M/M/1/m queue *Int. Jr.of Math. Oper Res.* vol. 5, no. 1, 110-120(2013) International ISSN: Online: 1757-5869
- Acharya S.K. Maximum likelihood estimates in an M/M/C queue with heterogeneous servers *Int. Jr. of Math. Oper. Res.* vol. 5, no. 4, 527-549.(2013) International ISSN: Online:1757-5869
- Bagh S. Assesment of noise levels in the ambient air quality of a chromite mining complex *International JI of Env. Science* Vol 1, No 7, 1785-1796 (2011) International
- Bagh S. Degree of association of Industrial noise with the heavy earth moving machineries in a chromite mining complex at odisha, India. *Indian journal of Sciences and Technology.* Vol4, No 8, 910-914 (2011)
- Bagh S. Status of Ambient noise in a chomite mining complex
An analysis & assessment Published in the journal New York Science journal Vol 4, No 8,53-59 (2011) International
- Bagh S. Exceedence measure of a class of random algebraic polynomials *International journal of Computational Science and Mathematics* Vol 4, No 2,123-134(2012) International
- Bagh S. Exceedence measure of a random algebraic polynomials . *International journal of Statistics & Analysis* Vol 2, No 4,467-477 (2012) International
- Bagh S. On the law of large numbers for trigonometric series *International journal of Computational & applied Mathematics (IJCAM)* Vol 7, No 4,473-477 (2012) International
- Bagh S. Occupational hearing loss of the workmen of an open cast chromite mines. *Indian journal of Occupational & Environmental Medicine.* Vol 16,No 1,18-21 (2012) National
- Bagh S. Determination of the test frequency causing significant hearing loss of the mine workers of an open cast chromite mine. *International Journal of Modern Engineering Research* Vol 2,No 4, 2832-2838 (2012) International
- Degree of association of NIHL with age, working experience & work stations of an open cast cromite mines. *The Malayasian journal of medical science, Malayasia.* Bagh S. Vol 19,No 4, 64-72 (2012) International
- Noise levels of heavy earth moving machineries in a chromite Mining Complex of Odisha,India
An assessment and analysis published in the journal of applied Research. Bagh S. Vol 3,No 6, 251-255 (2013) National
- Bagh S. The Expected Number of Maxima of a Random Algebraic Polynomial with Independently Normally distributed Random Variables Published in journal of Analysis & Number Theory Natural Science Publishing USA Vol 3,No 2,149-162 (2015) International
- TripathyC.K. An inventory model for Weibull time-dependence demand rate with completely backlogged shortages, *International Mathematical Forum.* No. 54, 2675-2687 (2010) ISSN 1312-7594
- TripathyC.K. Ordering policy for Weibull deteriorating items for quadratic demand with permissible delay in payments, *Applied Mathematical Sciences,* Vol. 4, No. 44, 2181-2191 (2010) International ISSN 1312-885
- TripathyC.K. An inventory model for Weibull deteriorating items with price dependant demand and time-varying holding cost. *Applied Mathematical Sciences,* Vol. 4, No. 44, 2171-2179 (2010) International ISSN 1312-885
- TripathyC.K. An Inventory Model with Time Dependent linear Deteriorating Items with Partial Backlogging, *Int. Journal of Math. Analysis,* Vol. 4, ,No. 38, 1873-1879 (2010)
- TripathyC.K. An EOQ Model for Time Dependent Linearly Deteriorating Items with Shortages *International Journal of Computational and Applied Mathematics.* Vol.5 (2), pp. 163-175 (2010)

- TripathyC.K. A Production Inventory model for Weibull deteriorating Items allowing price discount & permissible delay in payments Global Journal of Mathematical Sciences: Theory & practical vol2, No-1, ,1-12 (2010) International ISSN 0974-3200
- TripathyC.K. An EOQ Model for Linear Deteriorating Rates with Shortage and Permissible Delay in Payment. *The IUP Journal of Operations Management*. Vol. IX, No. 4,7-20 (2010) National
- TripathyC.K. An EPQ Model for Linear Deteriorating Item with Variable Holding Cost. *International Journal of Computational and Applied Mathematics* Volume 5 Number 2,199-205 (2010) National ISSN: 1819-4966
- TripathyC.K. An EOQ Model for Weibull Deteriorating Items with Power Demand and Partial Backlogging Int. J. Contemp. Math. Sciences Vol. 5, no. 38, 1895 – 1904(2010) International
- TripathyC.K. An EOQ model with time dependent Weibull deterioration and ramp type demand *International Journal of Industrial Engineering Computations*. Vol.2 , 307-318 (2011) International ISSN:1923-2934 (Online) ISSN: 1923-2926
- TripathyC.K., Ordering Policy for Linear Deteriorating Items for Declining Demand with Permissible Delay in Payments. *Int. J. Open Problems Compt. Math*.Vol. 4, No. 3, 152-161(2011). International ISSN:1998-6262
- TripathyC.K. Optimal Pricing and Ordering Policy for Three Parameter Weibull Deterioration Int. Journal of Math. Analysis Vol. 5, no. 6, 275–284 (2011) International
- TripathyC.K. An EOQ Model for Time Dependent Weibull Deterioration with Linear Demand and Shortages. *LogForum ,Scientific Journal of Logistics*. Vol. 8, No. 2,123-136(2012)
- TripathyC.K. An Inventory Model for Time Dependent Weibull Deterioration with Partial Backlogging *American Journal of Operational Research*. Vol. 2, No. 2,11-15 (2012) International ISSN: TBD
- TripathyC.K. An EOQ Model for Three Parameter Weibull Deterioration with Permissible Delay in Payments and Associated Salvage Value. *International Journal of Industrial Engineering Computations* Vol. 3,115-122 (2012) International ISSN: 1923-2934 (Online) ISSN: 1923-2926
- TripathyC.K. A Production Inventory Model for an Item with Three Parameter Weibull Deterioration and Price Discount *LogForum,Scientific Journal of Logistics* Vol. 8, No. 3,257-266. (2012) International ISSN: 1734-459X
- TripathyC.K. An inventory model for Weibull deteriorating items with salvage value *Int. J. Logistics Systems and Management* Vol. 22, No. 1, 67-76 (2015) International
- Sahu S.K. An EOQ model for varying items with weibull distribution deterioration and price-dependent demand *Journal of Scientific Research* Volume 2 ,No-1, 24-36 (2010) National ISSN: 2070-0237
- Sahu S.K., An EOQ model for deteriorating items with weibull distribution deterioration, unit production cost with quadratic demand and shortages *Applied Mathematical Science* . Volume 4 ,No-6, 271-288 (2010) National ISSN: 1312-885X
- Sahu S.K. A production lot-size inventory model for weibull deteriorating item with quadratic demand, quadratic production and shortages. *International Journal of computer Science & Communication* Volume 1,No-1, 257-262 (2010) International ISSN: 0973-7391
- Sahu S.K. Weibull deterioration rate Inventory models. *SCMS Journal of Management* . Volume 2,No-2, 68-79 (2010) National ISSN:0973-3167
- Sahu S.K. An inventory model for deteriorating itemswith on hand inventory dependent ramped type demand rate. *International Journal of Information Technology and Knowledge Management* Volume 2, 519-521 (2010) International ISSN: 0970-9150
- Sahu S.K. An inventory model for weibull deteriorating items with permissible delay in payments under inflation. *International journal of Research and reviews in applied sciences*, ,(2011),. Volume 6, No-1, 10-17 International ISSN: 2076-7366

- Sahu S.K. An inventory model for deteriorating items with different constant demand rates African journal of mathematics and computer science research Volume 5, No-9, 158-168. (2012) International ISSN: 2006-9731
- Sahu S.K. Anomaly detection using artificial neural network . *International journal of Engineering science & emerging technologies*. Volume 2, No-1, 29-36, (2012); International ISSN: 2231-6604
- Sahu S.K. A survey on detection method in intrusion detection system. *International journal of computer Application*. Volume 3, No-2, 81-90 (2012). International ISSN: 2250-1797
- Sahu S.K. Anomaly detection using different artificial neural network training functions. IJCSET. Volume 2, No-4, 1155-1159 (2012) International ISSN: 2231-0711
- Sahu S.K. An inventory model with weibull deterioration rate under the delay in payment in demand declining market. *Journal of Applied Mathematical Sciences*. Volume 6, No-23, 1121-1133 (2012) National ISSN: 1312-885X
- Sahu S.K. An inventory model for deteriorating items with quadratic demand and partial backlogging British Journal of Applied Science & Technology. Volume 2, No-2, (2012). International ISSN: 2231-0843
- Sahu S.K. A replenishment policy for items with price-dependent demand, time-proportional deterioration and no Shortages *International journal of Systems science*. Volume 43, No-5, 903-910 (2012) International ISSN: 0020-7721
- Sahu S.K. A note on inventory model for deteriorating items with quadratic-constant-quadratic type demand rate. International electronic engineering Mathematical society. Volume 1, 31-42 (2012) International ISSN: 2090-5297
- Sahu S.K. An EOQ model for a deteriorating item with time dependent exponential demand under permissible delay in payment. *Advances in Theoretical and Applied Mathematics*. Volume 7, No-3, 295-307 (2012) National ISSN: 0973-4554
- Sahu S.K. An EOQ model for deteriorating items quadratic demand and shortages International Journal of Inventory Control and Management. Volume 2, No-2, 257-268 (2012) International ISSN: 0975-3729
- Sahu S.K. Stolarsky's Extended Family Type Mean Values. *Bull. Pure Appl. Math*, Volume 6, No-2, 255-264 (2012) International ISSN: 0973-5933
- Sahu S.K. A note on the inventory model for deteriorating items with Trapezoidal type demand rate and variable deterioration Mathematical Sciences International Research Journal. Volume 1, No-2, 414-429 (2012) International ISSN: 2278-8697
- Sahu S.K. A two-warehouse inventory model for deteriorating items with exponentially declining demand under conditionally permissible delay in payment Mathematical Sciences International Research Journal Volume 1, No-2, 430-444 (2012) International ISSN: 2278-8697
- Sahu S.K. An EOQ Model for A Deteriorating Item with Time Dependent Exponential Demand Under Permissible Delay in Payment Journal of Computer and Mathematical Sciences. Volume 3, No-3, 358-369 (2012) National ISSN: 2319-8133
- Sahu S.K. Generalization of Centroidal Mean and its Dual Iranian Journal of Mathematical Sciences and Informatics Volume 8, No. 2 , 39-47 (2013) National ISSN: 1735-4463
- Sahu S.K. Schur harmonic convexity of Stolarsky extended mean values. *Scientia Magna* Volume 9, No-2, 18-29 (2013) National ISSN: 1556-6706
- Sahu S.K. Schur geometric convexity of gnan mean for two variables . *Journal of the international mathematical virtual institute*. Volume-3, 39-59 (2013) International ISSN: 1840—4359
- Sahu S.K. Retailer's optimal pricing and ordering policies of non-instantaneous deteriorating items with quadratic demand of time and linear holding cost Asian Journal of Current Engineering and Maths Volume 2 , No-5, 333-338 (2013) International ISSN: 2277-4920
- Sahu S.K. PCA Classification Technique of Remote Sensing Analysis of Colour Composite Image of Chillika Lagoon, Odisha, *International Journal of Advanced Research in Computer Science and Software Engineering* Volume 5, Issue 5 , 513-518 (2015) International ISSN: 2277 128X

- Sahu S.K. Chilika Lagloon A Support Vector Machine Binary Classification and Image Segmentation of Remote Sensing Data of International Journal of Research in Information Technology Volume III, Issue 5 , 191-204 (2015) International ISSN: 2001-5569
- Sahu S.K. Study on Remote Sensing Data Classification Using Statistical Techniques. Universe of Emerging Technologies and Science. Volume II, Issue 5 (2015) International ISSN: 2349 655X
- Gartia, R. Assesment of noise levels in the ambient air quality of a Chromite Mining Complex- A case study International Journal of Environmental Sciences Vol 1, No.7, 1785-1796 (2011) International ISSN: 0976-4402
- Gartia, R. Degree of Association of industrial noise with the heavy earth moving machineries in a chromite mining complex at Odisha, India Indian Journal of Science and Technology Vol. 4 No. 8, 910- 914 (2011) National ISSN: 0974-6846
- Gartia, R. Status of ambient noise in a chromite mining complex : An assessment and analysis New York Science Journal Vol. 4, No. 8,53-59 (2011) International ISSN: 1554-0200
- Gartia, R. Assesment of noise induced hearing loss of the mine workers of a chromite mines at Sukinda, Orissa, India. Noise & Vibration Worldwide. Vol. 43, No.2, 28-36 (2012) National ISSN: 0957-4565
- Gartia, R Occupational hearing loss of the workmen of an open cast chromite mines *Indian Journal of Occupational and Environmental Medicine*. Vol. 16, Issue-1., 18-21, (2012)
- Gartia, R. Determination of the test frequency causing significant hearing loss of the mine workers of an open cast chromite mine. International Journal of Modern Engineering Research(IJMER) Vol. 2, Issue 4, 2832-2838 (2012) International ISSN: 2249-6645
- Gartia, R. Hearing Threshold,Noise Levels and Worker's Profiles of an Open Cast Chromite Mines in Odisha, India. Malaysian Journal of Medical Sciences. Vol. 19, no. 4,64-72 (2012) International
- Gartia, R.Effects of Meteorological Parameters on Ambient Air Quality Noise in and around a Chromite Mining Complex- A Statistical Approach Research & Review A Journal of Statistics Volume 1, Issue 2, 11-23 (2012) National ISSN: 2278-2273
- Gartia, R. Noise Levels of Heavy Earth Moving Machineries in a Chromite Mining Complex of Odisha, India: An Assessment and Analysis Indian Journal of Applied Research Volume : 3 ,Issue : 6 , 251-255 (2013) National ISSN: - 2249-555X
- Gartia, R. The Realm of Health Sector in Rural Infrastructure of Odisha. Splint International Journal of Professionals. Vol-II, No-5, 29-38. (2015) International ISSN: 2349-6045
- Technonological Adaptation to Combat Climate Change in Agricultural Sector – A Statistical Approach” , Life Sciences. International Research Journal Gartia, R., Vol-2, Issue -2, 234-239 (2015)
- Gartia, R. The pursuit of Land Utilization: Insight into sustainable agriculture in Western Odisha” Accepted for Publication in the Jr. of ISEC Bangalore for publication. (2015) National
- Gartia, R.Climate Change and Natural Capital: Some veiled issues on sustainable livelihood in agriculture sector Accepted for Publication in the Jr. of ISEC Bangalore for publication (2015)
- Sahu. S.K. Inventory Management. LAP LAMBERT Academic ,Germany. 2014 ISBN NO-978-3-659-60993-0
- Sahu. S.K. Modelling on inventory control LAP LAMBERT Academic ,Germany. 2015 ISBN NO-978-3-659-70577-9