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(B) Book Chapters and Conferences Proceedings

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***First Position to the Team**
****Among 8 finalists in the competitions**
*****First Place to the Team**

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105. Anjana Mondal and **Somesh Kumar** (2023) Testing against ordered alternatives in two-way heteroscedastic ANCOVA models without interaction. **International Conference on Statistics, Data Science and Reliability: Exploring Trends, Methods & Applications in Conjunction with 7th Convention for Indian Association for Reliability and Statistics**, Department of Statistics, M.D. University, Rohtak, 24th-26th December, 2023.
106. Anjana Mondal and **Somesh Kumar** (2024) Testing for trend in Two-way heteroscedastic additive ANCOVA model. **National Conference on Data Science and Applied Statistics**, Dept. of Statistics, School of Mathematical Sciences, K.B. C. North Maharashtra University, Jalgaon, 12th -13th January, 2024.
107. **Somesh Kumar** (2024) Measurements in ancient Indian civilization and evolution of modern number system. **International Conference on the History of Mathematics**, Centre for Indian Knowledge Systems, IIT Guwahati, January 19-21, 2024.
108. Anjana Mondal, Paavo Sattler and **Somesh Kumar** (2024) Testing for ordering of treatment effects in balanced two-way crossed heteroscedastic ANOVA. **International Conference on Recent Advances in Probability and Statistics in Interdisciplinary Research RAPSIR-2024**, Department of Statistics, University of Allahabad, February 6-8, 2024.
109. Shreyashi Basak, Paavo Sattler and **Somesh** Kumar (2024) Inference on the common mean direction of several Fisher-von Mises-Langevin distributions. **National Conference on Recent Advances in Statistics and Data Science**, Department of Statistics, Sri Padmavati Mahila Visvavidyalayam, Tirupati, February 18-19, 2024.
110. Tulika Rudra Gupta, Markus Pauly and **Somesh Kumar** (2024) A new index for comparing relative group effects. **International Workshop on Stochastic Models in Data Science**, Department of Mathematics and Statistics, IIT Tirupati, February 17-20, 2024.
111. Priyanka Sehrawat, Jitendra Kumar and **Somesh Kumar** (2024). A critical analysis of dimension reduction method for estimation of statistical moments in uncertainty quantification. **International Conference on Research Trends in Mathematics and Data Science**, Partician College of Arts and Science, Chennai & Sacred Heart College, Tirupattur, 1st -2nd March, 2024.
112. Tulika Rudra Gupta, Markus Pauly and **Somesh Kumar** (2024) A new stress-strength index for comparing multiple treatments. **Virtual Seminar on Time Series and Reliability**, Department of Statistics, CUSAT, 2nd March, 2024.
113. Anajana Mondal, Shreyashi Basak, Paavo Sattler and **Somesh Kumar** (2024) Two problems in multivariate analysis. **3 Day workshop on Multivariate Data Analysis and Mathematical Tools for Sciences, Engineering and Management**, Department of Engineering Sciences, ABVIIITM, Gwalior, 20th-22nd May, 2024.
114. Raju Dey, Arne C. Bathke and **Somesh Kumar** (2024) Detecting similarity between cancer survival times using an overlap index. **International Conference on Recent Advances in Mathematics and Data Science**, Department of Mathematics, Bioinformatics and Computer Applications, MANIT, Bhopal, 27th-28th June, 2024.
115. Raju Dey and **Somesh Kumar** (2024) New tests for simultaneous ordering in a two-way additive ANOVA. **Ninth International Webinar on Recent Trends in**

Statistical Theory and Applications – 2024 (WSTA-2024), Kerala University, Trivendrum, 29th June – 02nd July 2024.

116. Raju Dey and **Somesh Kumar** (2024) Testing pattern of a covariance matrix with a Toeplitz structure. **Ninth International Webinar on Recent Trends in Statistical Theory and Applications – 2024 (WSTA-2024)**, Kerala University, Trivendrum, 29th June – 02nd July 2024.
117. Subha Halder, Anjana Mondal and **Somesh Kumar** (2024) Testing against tree ordered alternatives under heteroscedastcity. **Ninth International Webinar on Recent Trends in Statistical Theory and Applications – 2024 (WSTA-2024)**, Kerala University, Trivendrum, 29th June – 02nd July 2024.
118. Anjana Mondal, Markus Pauly and **Somesh Kumar** (2024) Testing homogeneity of location parameters of several exponential populations against ordered alternatives. **Ninth International Webinar on Recent Trends in Statistical Theory and Applications – 2024 (WSTA-2024)**, Kerala University, Trivendrum, 29th June – 02nd July 2024.

*** Best Paper Award to M.R. Tripathy**
****Best Poster Award to Kanika**
*****Young Scientist Award to S. Kayal**
 # Best Poster Award to L.K. Patra
^R.S. Varma Best Paper Award to N. Jana
##Second Best paper Award to L.K. Patra
& Best Paper Award to Deepak Singh
Prof. U.S. Nair Best Paper Presentation Award to Tulika Rudra Gupta

(D) Books and Monographs/Lecture Notes

1. S.P. Pal, **Somesh Kumar** (Editors) (2006) **Quantum Information, Computation and Communication.** Allied Publishers Pvt. Ltd., New Delhi.

(E) Eprints (www.arxiv.org/quant-ph)

1. S.P. Pal, S.K. Singh & **Somesh Kumar** (2003) Multi-partite quantum entanglement versus randomization: fair and unbiased leader election in networks. eprint **quant-ph/0306195 v1, 29 June 2003**.
2. S.K. Singh, **Somesh Kumar** & S.P. Pal (2004) Characterizing the combinatorics of distributed EPR pairs for multi-partite entanglement. eprint **quant-ph/0306049 v2, 1 Jan 2004**. (Earlier version **quant-ph/0306049 v1, 6 June 2003**).
3. S.K. Singh, S.P. Pal, **Somesh Kumar** & R. Srikanth (2005) A combinatorial approach for studying LOCC transformations of multipartite states. eprint **quant-ph/0406135 v3, 10 Nov 2005.** (Earlier versions **quant-ph/0406135 v1, 18 June 2004** and **quant-ph/0406135 v2, 12 Jan 2005**).
4. S.P. Pal, S. Das & **Somesh Kumar** (2005) Constant communication complexity protocols for multiparty accumulative Boolean functions. eprint **quant-ph/0510050 v2, 13 June 2006** (Earlier version **quant-ph/0510050 v1, 7 Oct 2005**).

5. Archit Rungta, Yash Soni, Parakh Agarwal, Biswajit Ghosh and **Somesh Kumar** (2020) Real-time and Autonomous Detection of Helipad for Landing Quad-Rotors by Visual Servoing. eprint **arXiv preprint arXiv:2008.02236, 5th August 2020.**

(F) Development of Video Courses

1. Developed a forty hours Video Course "Probability and Statistics" under National Program of Technology Enhanced Learning (NPTEL) of Ministry of Human Resources and Development, Government of India during 2009-10. Available at http://nptel.iitm.ac.in/courses and You Tube

2. Developed a forty hours Video Course "Statistical Inference" under National Program of Technology Enhanced Learning (NPTEL) of Ministry of Human Resources and Development, Government of India during 2011-12. Available at http://nptel.iitm.ac.in/courses/ and You Tube

3. Developed a eleven hours Module on "Probability and Statistics" for the Video Course "Advanced Engineering Mathematics" under National Program of Technology Enhanced Learning (NPTEL) of Ministry of Human Resources and Development, Government of India during 2011-12. Available at http://nptel.iitm.ac.in/courses/ and You Tube

4. Developed a forty hours Video Course "Statistical Methods for Scientists and Engineers" under National Program of Technology Enhanced Learning (NPTEL) of Ministry of Human Resources and Development, Government of India during 2013-14. Available at http://nptel.iitm.ac.in/courses/ and You Tube

5. Developed a fifteen lecture module on "Vector Calculus" for the Video Course "Advanced Calculus for Engineers" under National Program of Technology Enhanced Learning (NPTEL) of Ministry of Human Resources and Development, Government of India during 2021-22. Available at http://nptel.iitm.ac.in/courses/ and You Tube

(G) Web Course Development

Modules in **Engineering Mathematics - I and II** for National Agricultural Innovation Project under World Bank funded scheme of Indian Council of Agricultural Research

(H) Online Teaching: Teaching Mathematics –I to students of nearly 130 engineering colleges across the country under "Quality Enhancement in Engineering Education" (QEEE) project of the Department of Higher Education, MHRD during Autumn, 2014-15 in **ONLINE** mode.

(I) Online Certification Course

1. Offered course “Probability and Statistics” under **NPTEL Certification Courses Program of ME** during January-April 2016.
2. Offered course “Probability and Statistics” under **NPTEL Certification Courses Program of ME** during January-April 2017.
3. Offered course “Probability and Statistics” under **NPTEL Certification Courses Program of ME** during January-April 2019.
4. Offered course “Statistical Inference” under **NPTEL Certification Courses Program of ME** during January-April 2019.
5. Offered course “Probability and Statistics” under **NPTEL Certification Courses Program of ME** during July-November 2021.
6. Offered course “Statistical Inference” under **NPTEL Certification Courses Program of ME** during January-April 2022.
7. Offered course “Advanced Calculus for Engineers” under **NPTEL Certification Courses Program of ME** during July-November 2022.
8. Offered course “Probability and Statistics” under **NPTEL Certification Courses Program of ME** during January-April 2023.
9. Offered course “Statistical Inference” under **NPTEL Certification Courses Program of ME** during January-April 2023.
10. Offered course “Probability and Statistics” under **NPTEL Certification Courses Program of ME** during July-November 2023.
11. Offered course “Advanced Calculus for Engineers” under **NPTEL Certification Courses Program of ME** during July-November 2023.
12. Offered course “Probability and Statistics” under **NPTEL Certification Courses Program of ME** during January-April 2024.
13. Offering course “Advanced Calculus for Engineers” under **NPTEL Certification Courses Program of ME** during July-November 2024.