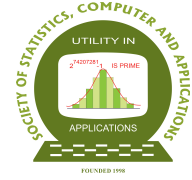


Special Proceedings: ISBN #: 978-81-950383-8-1
27th Annual Conference, 21-23 February 2025



PREFACE

We are pleased to present the Special Conference Proceedings 2025 from the twenty-seventh annual conference of the Society of Statistics, Computer, and Applications (SSCA), organized by the Department of Statistics at North-Eastern Hill University, Shillong, Meghalaya, India, from February 21-23, 2025. This conference was a significant part of the broader international event focused on “Advances of Interdisciplinary Statistics and Applications in AI & ML (AISAAM-2025).”

Founded in 1998, with its inaugural gathering at Haryana Agricultural University, Hisar, SSCA has consistently organized annual conferences at various educational institutions across the country. The society’s core mission is to foster research at the intersection of Statistics and Information Technology, supporting both theoretical and applied statisticians dedicated to technological advancements for societal progress. SSCA also promotes open access to knowledge through its journal, *Statistics and Applications*, which facilitates free downloads, saving, and printing of full-length papers. In addition to regular issues, the journal periodically releases special volumes addressing significant global and national themes.

The recent 27th conference aimed to provide a unified platform for discussions on regional and global statistical issues. Distinguished experts in theoretical and applied statistics from India and abroad, particularly from the USA, actively participated in knowledge dissemination. Speakers represented prestigious Indian institutions, including the Indian Statistical Institute, IITs, ICAR, RBI, universities, and government offices. The conference featured several notable events, including a pre-conference workshop and various technical sessions. These sessions included the M.N. Das Memorial Lecture and a dedicated session on Financial Statistics, where renowned statisticians and leading practitioners shared insights on finance-related topics. Additionally, three endowment lectures were presented: the B.K. Kale Memorial Endowment Lecture, the J.K. Ghosh Memorial Endowment Lecture, and the Bikas Kumar Sinha Endowment Lecture. These lectures were delivered by speakers closely associated with, or students of, the respective honorees. Furthermore, the V.K. Gupta Endowment Award Lecture for Achievements in Statistical Thinking and Practice was presented by Shyamal Peddada from the USA on June 22, 2025. In 2024, the SSCA established the Aditya Shastri Memorial Lecture in memory of the late Aditya Shastri, Vice Chancellor of Banasthali Vidyapith, who passed away in 2021 due to COVID-19. The first lecture was delivered by Navin M. Singhi, and this year, the second lecture was presented by R.K. Sharma.

The Executive Council of SSCA resolved to compile the “Special Conference Proceedings 2025,” highlighting selected presentations, including those from the specialized Financial Statistics session. The Guest Editors appointed by the Council—V.K. Gupta, Baidya Nath Mandal, Durba Bhattacharya, R. Vishnu Vardhan, Ranjit Kumar Paul, Rajender Parsad, and Dipak Roy Choudhury—meticulously curated these proceedings. Although constraints limited the inclusion of all invited papers, esteemed speakers were invited to submit their research contributions. Following a rigorous review process, a distinguished selection of 13 papers was accepted for publication in the special proceedings. We extend our sincere gratitude to all authors for the prompt submission of high-quality research papers. We owe a special debt of thanks to all the reviewers whose dedicated efforts ensured a swift and thorough review process, completing it within a short timeframe. Special acknowledgment is also due to all members and office bearers of the SSCA Executive Council for their steadfast support. We are particularly grateful to Ashish Das, Treasurer of the SSCA, for arranging funds for publishing these special proceedings. We also thank Ms. Jyoti Gangwani for meticulously formatting the papers. Furthermore, our deepest appreciation goes to all the family members and students who sponsored the Endowment Lectures. The special proceedings from these sessions have been assigned the ISBN #: 978-81-950383-8-1.

We are confident that the contents of these special proceedings will be immensely beneficial to our readership, fostering further insights and advancements in the field of Statistics and its applications in AI and beyond. We welcome any suggestions for improving future conferences and special proceedings as we continually strive to better serve the statistical community.

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September 30, 2025