

## **Editorial**

### **Shaping the Future: A Vision for the *Annals of Applied Statistics* in a Transformative Era**

Dear Readers, Authors, Referees, Associate Editors and Area Editors:

I am deeply honored and delighted to serve as the Editor-in-Chief for the *Annals of Applied Statistics*, starting January 1, 2025. As we enter this new phase of the journey, I would like to sincerely thank the current Editor-in-Chief, Dr. Ji Zhu, and also share my vision and a few thoughts for the journal.

#### **Vision for a transformative era**

We are now in a transformative era, with rapid advancements in technology and artificial intelligence (AI), and the emergence of unprecedented data modalities and volumes. It presents a unique and timely opportunity to foster stronger connections between statistics, AI, and real-world applications. Statistical principles and methodological innovation are critical to addressing the complexities of modern applications. Our journal will strive to serve as a bridge, and will promote collaborative research to better harness the power of data and address pressing challenges across science, technology, and society.

#### **Introduction of new tracks**

In addition to regular research papers, we are excited to introduce some new tracks to enhance the journal's scope and impact:

- **Prospective papers:** These articles will provide an overview of a specific area or topic, identify open questions with significant potential impact, and offer resources to help researchers engage with the field more effectively.
- **Data-centric papers:** These articles will provide benchmark datasets, and focus on introducing new data types, data infrastructures, and data processing pipelines, to facilitate data accessibility and usability.

#### **Emphasis on emerging topics**

While we will remain committed to research in all aspects of applied statistics, such as computational biology, medicine, neuroscience, environmental, physical, social and political sciences, we are equally excited to emphasize and explore emerging research topics, including but not limited to:

- Large language models and generative AI;
- Deep learning and reinforcement learning;
- Electronic health records and personalized medicine;
- Wearable devices and smart health;
- Causal inference in complex biological, medical and social systems.

We also welcome your suggestions for additional cutting-edge topics that align with our mission.

## Uniqueness about our journal

Our journal is distinguished by its strong emphasis on solving real-world problems through rigorous and novel statistical methodology. Papers published here should:

- Be driven by real-world applications: Research should address a real-world problem of practical significance, not just a theoretical exercise.
- Feature prominent use of real data: Data should play a central role, not merely serve as an illustrative example. We highly regard new and actionable insights derived from in-depth analysis of data that have direct impact on science.
- Innovate methodologically: While we encourage applications of existing methods, we particularly value the development of new methodologies that yield novel insights into practical problems.

## Commitment to timely review and reproducible research

We understand the critical importance of timely publication in a fast-moving field, as well as the necessity of reproducible research.

- Streamline the review process: We will work diligently to maintain reasonable review timelines and expedite decisions whenever feasible. We will strive to provide high-quality and constructive reviews.
- Promote reproducible research: Authors are strongly encouraged to submit data sets, computer code and other supporting materials after the paper is accepted to facilitate reproducibility. Authors are also encouraged to follow [the predictability-computability-stability principle and documentation](#).

This is an exciting time to be part of the statistics and AI communities. I invite researchers, practitioners, and innovators to contribute their best work to our journal. Together, we can push the boundaries and shape the future of our discipline. Thank you for your continued support, and I look forward to collaborating with you all in the years to come.

Warm regards,

Lexin Li  
Editor-in-Chief  
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