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## 2024 Kirkman Medal is awarded to Zixiang Xu

<u>Kirkman Medals</u> recognize excellent research by Fellows or Associate Fellows of the ICA early in their research career, as evidenced by an **excellent body of published research**.

Dr. Xu earned the B.Sc. in Mathematics at School of Mathematical Sciences, Zhejiang University. He went on to earn the Ph.D. in Mathematics under advisor Gennian Ge at the School of Mathematical Sciences, Capital Normal University in China. His currently working with host Hong Liu at the Extremal Combinatorics and Probability Group, Institute for Basic Science, Daejeon, South Korea.

**Zixiang Xu** has made several contributions to extremal combinatorics and related fields. His remarkable body of work includes the development of novel techniques in the study of bipartite Turan problems, the resolution of several important graph and hypergraph Turan problems, and the establishment of a bridge between the chromatic threshold problem in extremal graph theory

and the (p,q)-theorem in discrete geometry. He also added a new twist to the classic linear algebra method, and provided elegant and short proofs for the stability results of the celebrated Erdős-Ko-Rado theorem, and Kleitman's theorem on the maximum cardinality of anticodes, and improved the longstanding Frankl-Pach upper bound for uniform set systems with bounded VC-dimension.

Dr. Zixiang Xu has authored 27 academic papers, with 16 of them successfully published, most of which appeared in the top journals in the fields of combinatorics and coding theory. He has also delivered more than 30 academic presentations on various universities and institutes. With extremal combinatorics as his primary research focus, his research interests also extend to geometry, algebra, and coding theory. A striking feature of his research is the ability of bridging together problems and methods from different disciplines. **The Institute of Combinatorics and its Applications** is an international scholarly society that was founded in 1990 by Ralph Stanton; the ICA was established for the purpose of promoting the development of combinatorics and of encouraging publications and conferences in combinatorics and its applications.