



Association for  
Computing Machinery

## NEWS RELEASE

**Contact:** Jim Ormond  
212-626-0505  
[ormond@hq.acm.org](mailto:ormond@hq.acm.org)

### **Computer Scientists Earn Technical Excellence Awards for Outstanding Work**

#### ***Important Breakthroughs Celebrated by Foremost Computing Association***

**New York, NY, May 27, 2026** – ACM, the Association for Computing Machinery, today announced the recipients of three prestigious technical awards. This year’s four awardees were selected by their peers for innovations to global wireless standards, machine learning, and 3D generative AI.

**Erdal Arikan**, Professor, Bilkent University, receives the **ACM Paris Kanellakis Theory and Practice Award** for the discovery of channel polarization and the construction of polar codes—the first explicit, capacity-achieving codes with efficient encoding and decoding adopted in global wireless standards.

In his foundational 2009 paper, [\*Channel Polarization: A Method for Constructing Capacity-Achieving Codes for Binary-Input Memoryless Channels\*](#), Arikan solved a fundamental open problem in information theory that had persisted since Claude Shannon’s 1948 work: the construction of an explicit coding scheme that achieves channel capacity with low computational complexity. Arikan introduced a method that transforms independent noisy channels into synthesized channels that are either essentially noise-free or completely noisy. This polarization effect allowed for a deterministic code construction that reaches the theoretical limits of data transmission using highly efficient encoding and decoding processes.

The transition of polar codes from a profound theoretical milestone to a cornerstone of modern communication infrastructure represents an extraordinary achievement in the field of computing. By bridging the gap between asymptotic theory and practical performance, Arikan’s discovery moved from academic publication to a global industrial standard within a single decade.

*The ACM Paris Kanellakis Theory and Practice Award honors specific theoretical accomplishments that have had a significant and demonstrable effect on the practice of computing. This award is accompanied by a prize of \$10,000 and is endowed by contributions from the Kanellakis family, with additional financial support provided by ACM’s Special Interest Groups on Algorithms and*

*Computation Theory (SIGACT), Design Automation (SIGDA), Management of Data (SIGMOD), and Programming Languages (SIGPLAN), the ACM SIG Projects Fund, and individual contributions.*

**Kevin Leyton-Brown**, Professor, University of British Columbia, receives the **ACM - AAAI Allen Newell Award** for fundamental contributions to artificial intelligence and machine learning, focusing on applications to multiagent systems, heuristic algorithms, social impact, and market design.

Leyton-Brown has made numerous significant contributions to artificial intelligence, specifically in the areas of computational economics and game theory and automated configuration/design of algorithms using machine learning. He is internationally recognized as a leader in these areas, and as a scientist who tackles interesting, impactful problems in a creative manner. Complementing his strong theoretical skills is an empirical approach to identifying and solving difficult and important problems.

In the area of multi-agent systems, Leyton-Brown has made numerous contributions which have proven to have a sustained impact on the field. He is perhaps best known for his work on combinatorial auctions—auctions in which bidders can express their valuations for collections of goods rather than single goods—leading to much greater economic efficiency.

*The ACM - AAAI Allen Newell Award is presented to an individual selected for career contributions that have breadth within computer science, or that bridge computer science and other disciplines. The Newell award is accompanied by a prize of \$10,000, provided by ACM and the Association for the Advancement of Artificial Intelligence (AAAI), and by individual contributions.*

**Ben Mildenhall**, co-founder, World Labs, and **Pratul Srinivasan**, Research Scientist, Google DeepMind, are the recipients of the **ACM Grace Murray Hopper Award** for contributions to radiance field representations, 3D scene capture and rendering, and pioneering neural implicit representations and 3D generative AI.

Mildenhall and Srinivasan's research fundamentally transformed computer graphics and vision by introducing Neural Radiance Fields (NeRF), a breakthrough that replaced decades of reliance on explicit geometric representations with differentiable neural scene representations. This paradigm shift not only achieved unprecedented realism in rendering novel views, but also established the broader framework of neural fields, now widely adopted across scientific domains including medical imaging, astronomy, and computational physics.

Their contributions underpin widely deployed systems in major products including immersive mapping, 3D commerce, and large-scale scene visualization, and have been adopted across leading technology companies. By bridging neural rendering and generative modeling, they have driven the emergence of 3D-aware AI systems and opened a rich frontier that will shape research and applications for years to come.

*The ACM Grace Murray Hopper Award is given to the outstanding young computer professional of the year, selected on the basis of a single recent major technical or service contribution. This award is accompanied by a prize of \$35,000. The candidate must have been 35 years of age or less at the time the qualifying contribution was made. Financial support for this award is provided by Microsoft.*

ACM will present these and other awards at its annual Awards Banquet on June 13 in San Francisco.

**About ACM**

ACM, [the Association for Computing Machinery](#), is the world's largest educational and scientific computing society, uniting computing educators, researchers, and professionals to inspire dialogue, share resources, and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

###