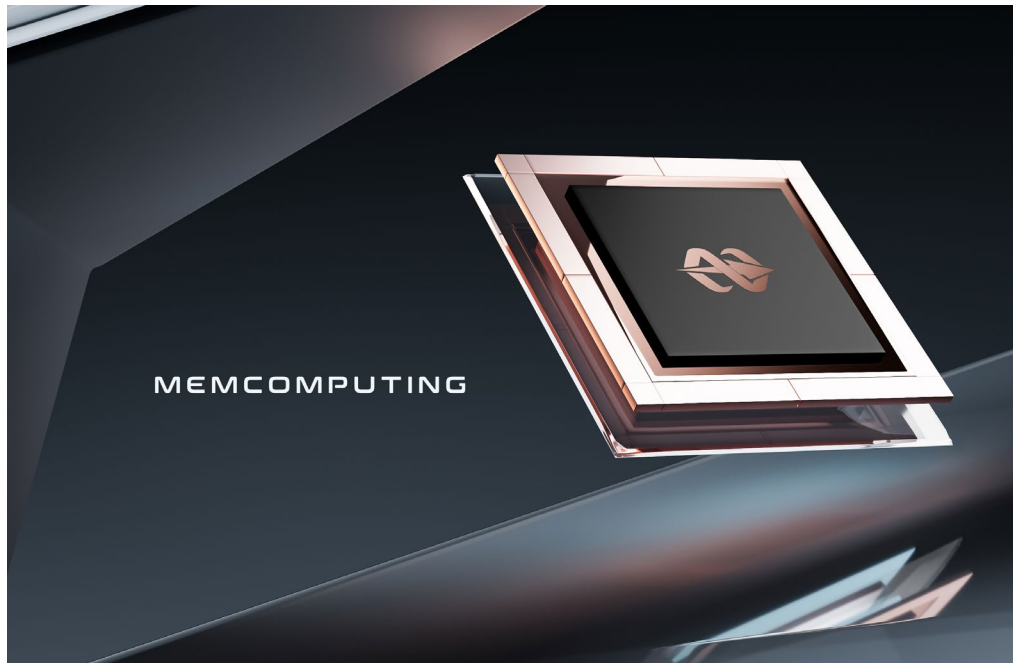


PHYSIKALISCHES KOLLOQUIUM

AM 07. JULI 2025 UM 16 UHR C.T.
IM GROßEN HÖRSAAL



MEMCOMPUTING AND THE FUTURE OF COMPUTING

MASSIMILIANO DI VENTRA

UNIVERSITY OF CALIFORNIA, UCSD

Our reliance on modern computers for a wide range of daily tasks cannot be understated. It is projected to grow so fast that the energy required for such computations will soon surpass the energy we produce worldwide. To avoid such a scenario, radically new approaches to computation are needed. MemComputing has been developed to address this issue. It is a new brain-inspired approach that employs memory (time non-locality) to both process and store information on the same physical location. I will discuss the physics behind MemComputing, and its application to a variety of computational problems of both academic and industrial importance, showing its advantages over traditional approaches and even quantum computing. I will conclude with a bird's-eye view of what the future of computing may hold.

AKTUELLE INFORMATIONEN FINDEN SIE HIER: WWW.PHYSIK.UNI-FREIBURG.DE

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