



复旦大学物理系 Colloquium

Time: 14:00, Tuesday, 2024.4.16

Location: C108, Jiangwan Physics Building

Magnonics and Ferronics

Prof. Gerrit Bauer

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Abstract: The duality between electric and magnetic dipoles in electromagnetism only partly applies to condensed matter. In particular, the elementary excitations of the magnetic and ferroelectric orders, namely magnons and ferrons, differ in many respects. I will compare the basic physics underlying the advanced field of “magnonics” with that of the emerging field of ferronics and share recent insights.



Biography: Professor Gerrit Bauer received his Dr. rer. nat. degree from TU Berlin in 1984. He was a scientific staff at Philips Research Laboratories in Eindhoven from 1986 to 1992, and a professor at Delft University of Technology from 1992 to 2022. He has been a professor at Tohoku University, Japan since 2011, and chair professor (part-time) at Kavli ITS, Univ. of the Chinese Academy of Sciences. His research interests are currently theoretical condensed matter theory in nanomagnetism, spintronics, and ferroelectricity. He is recognized as Clarivate “Highly Cited Researcher” (2018), and China State High-End Project Foreign Expert (2018). He is the recipient of Roentgen Award of Würzburg University (2000), IEEE Distinguished Lecturer of the Magnetics Society (2012), and Humboldt Research Award of the AvH-Foundation (2023). He is a Fellow of the American Physical Society, Fellow of the Japan Society of Applied Physics, F.C. Donders Chair at Utrecht University and F. Zernike Chair at Groningen University.