ICTS DISTINGUISHED LECTURE

Arithmetic Topological Quantum Field Theory

Ideas of quantum field theory have completely changed the mathematical landscape of geometry and topology over the last 40 years. This has included new definitions (such as quantum field theoretic invariants of manifolds) and new problems (mirror symmetry) as well as modes for thinking about classical problems from the point of view of physics (quantum cohomology and enumerative geometry). In the last ten years, the possibility has emerged of an extension of this influence to arithmetic geometry, including the study of arithmetic invariants, Galois representations, and the Langlands programme. This talk will survey some of these developments and present some prospects for an arithmetic topological quantum field theory.

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🔗 Zoom Link: https://shorturl.at/Co4zc
Meeting ID: 941 8864 2056
Passcode: 020203

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Minhyong Kim is Director and Sir Edmund Whittaker Professor of Mathematical Sciences at the International Centre for Mathematical Sciences in Edinburgh. He works on arithmetic geometry, the study of spaces built out of finitely-generated systems of numbers, employing ideas of homotopy theory and mathematical physics, especially topological quantum field theory. Minhyong grew up in Seoul and did his post-graduate studies at Yale University in the US. He has held professorships at institutions on three continents including the Korea Institute of Advanced Study and the University of Oxford, where he was head of the number theory research group.