

# Green Family Lecture Series

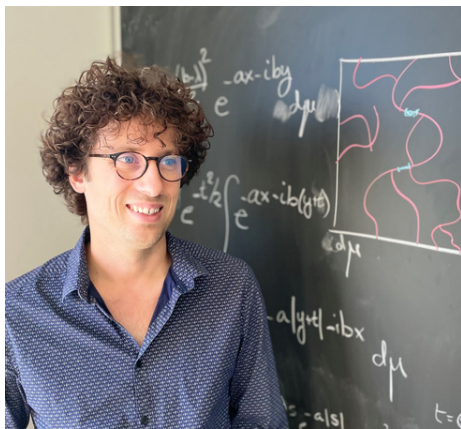


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## Professor Hugo Duminil-Copin

Born in 1985 in Châtenay-Malabry in France, Hugo Duminil-Copin grew up in the Paris region. After passing through the École Normale Supérieure in Paris, he graduated from the University of Paris-Saclay. Appointed professor of mathematics at the University of Geneva in 2013, he has also been a permanent professor at the Institut des Hautes Etudes Scientifiques in Bures-Sur-Yvette since 2016. In 2022, he received the Fields medal from the IMU.

### From Coffee to Mathematics: Making Connections and Finding Unexpected Links

The game of HEX has deep mathematical underpinnings despite its simple rules. What could this game possibly have to do with coffee?! And how does that connection, once identified, lead to consideration of ferromagnetism and even to the melting polar ice caps? Join Hugo Duminil-Copin, Professor of Mathematics at the University of Geneva and IHES, for an exploration of the way in which mathematical thinking can help us make some truly surprising connections.

**Cookies and Coffee: TBD**

 Monday, May 20, 2024  5:00 pm

 Mong Auditorium, UCLA Samueli School of Engineering



Reception immediately following at IPAM.

This lecture will be accessible to a general public audience.

### Critical phenomena through the lens of the Ising model

The Ising model is one of the most classical lattice models of statistical physics undergoing a phase transition. Initially imagined as a model for ferromagnetism, it revealed itself as a very rich mathematical object and a powerful theoretical tool to understand cooperative phenomena. Over one hundred years of its history, a profound understanding of its critical phase has been obtained. While integrability and mean-field behavior led to extraordinary breakthroughs in the two-dimensional and high-dimensional cases respectively, the model in three and four dimensions remained mysterious for years. In this talk, we will present recent progress in these dimensions based on a probabilistic interpretation of the Ising model relating it to percolation models.

**Cookies and Coffee: TBD**

 Tuesday, May 21, 2024  5:00 pm

 Mong Auditorium, UCLA Samueli School of Engineering

This lecture is intended for a scientific audience.

