

## **Heisenberg antiferromagnet on a triangular lattice: the wanted, the true, and the different**

I will provide an overview of some theoretical ideas that historically surrounded the triangular-lattice antiferromagnets (TLAFs). I will argue that the truly distinct and unusual feature of the TLAF is in its excitation spectrum. While the ground state of the Heisenberg antiferromagnet on a triangular lattice is magnetically ordered, large part of its spectrum has an intrinsic lifetime due to spontaneous decays.

I will demonstrate that this property stems naturally from the non-collinearity of the ground-state spin configuration that, in turn, is related to geometric frustration. We conclude that magnon decays must be prominent in a wide class of noncollinear antiferromagnets. A nontrivial type of singularities associated with the topological transitions of the decay surfaces will be discussed.