

All the way with Gaston Floquet: A theory for flicker hallucinations

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When the human visual system is subjected to diffuse flickering light in the range of 5-25 Hz, many subjects report beautiful swirling colorful geometric patterns. In the years since Jan Purkinje first described them, there have been many qualitative and quantitative analyses of the conditions in which they occur. Here, we use a simple excitatory-inhibitory neural network to explain the dynamics of these fascinating patterns. We employ a combination of computational and mathematical methods to show why these patterns arise. We demonstrate that the geometric forms of the patterns are intimately tied to the frequency of the flickering stimulus.

The lecture will take place in Thackeray 704 at 4:00pm.
Refreshments will start at 3:30pm.