

## **Noise, chirality, and chaos in the dynamics of magnons and magnetic solitons**

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### **Rapporteurs :**

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### **Résumé :**

Nanoscale magnetism offers a rich playground for studying nonlinear phenomena. I will discuss work I have undertaken on the stochastic theory of spin-torque nano-oscillators, nanocontact vortex oscillators including chaotic phases, channelling and nonreciprocal spin wave propagation in chiral systems, thermally-driven domain wall processes, and skyrmion dynamics. I conclude with some perspectives that follow from this research, namely chaos-based information processing, time-delay phenomena in micromagnetism, and stochastic processes in chiral magnets.