

## IMAR Monthly Lecture

# Spectral asymptotics of the Neumann Laplacian with variable magnetic field on a smooth bounded domain in three dimensions

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**Abstract:** This talk is devoted to the semiclassical spectral analysis of the Neumann magnetic Laplacian on a smooth bounded domain in three dimensions. Under a generic assumption on the variable magnetic field (involving a localization of the eigenfunctions near the boundary), we establish a semiclassical expansion of the lowest eigenvalues. In particular, we prove that the eigenvalues become simple in the semiclassical limit. This is a joint work with Nicolas Raymond (Angers), Maha Aafarani (Al Maaref University) and Khaled Abou Alfa (Nantes).